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Summary of Notifiable Diseases — United States, 2008

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION

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Preface

The *Summary of Notifiable Diseases— United States, 2008* contains the official statistics, in tabular and graphic form, for the reported occurrence of nationally notifiable infectious diseases in the United States for 2008. Unless otherwise noted, the data are final totals for 2008 reported as of June 30, 2009. These statistics are collected and compiled from reports sent by state health departments and territories to the National Notifiable Diseases Surveillance System (NNDSS), which is operated by CDC in collaboration with the Council of State and Territorial Epidemiologists (CSTE). The *Summary* is available at http://www.cdc.gov/mmwr/summary.html. This site also includes publications from previous years.

The Highlights section presents noteworthy epidemiologic and prevention information for 2008 for selected diseases and additional information to aid in the interpretation of surveillance and disease-trend data. Part 1 contains tables showing incidence data for the nationally notifiable infectious diseases during 2008.* The tables provide the number of cases reported to CDC for 2008 and the distribution of cases by month, geographic location, and the patient's demographic characteristics (age, sex, race, and ethnicity). Part 2 contains graphs and maps that depict summary data for certain notifiable infectious diseases described in tabular form in Part 1. Part 3 contains tables that list the number of cases of notifiable diseases reported to CDC since 1977. This section also includes a table enumerating deaths associated with specified notifiable diseases reported to CDC's National Center for Health Statistics (NCHS) during 2002–2006. The Selected Reading section presents general and disease-specific references for notifiable infectious diseases. These references provide additional information on surveillance and epidemiologic concerns, diagnostic concerns, and disease-control activities.

Comments and suggestions from readers are welcome. To increase the usefulness of future editions, comments about the current report and descriptions of how information is or could be used are invited. Comments should be sent to Data Operations Team—NNDSS, Division of Notifiable Disease Surveillance (Proposed), Public Health Surveillance Program Office (Proposed) at soib@cdc.gov.

* No cases of anthrax; diphtheria; Eastern equine encephalitis virus disease, non-neuroinvasive; poliomyelitis, paralytic; poliovirus infection, nonparalytic; Powassan virus disease, nonneuroinvasive; rubella, congenital syndrome; severe acute respiratory syndrome-associated coronavirus disease (SARS-CoV); smallpox; vancomycin-resistant *Staphylococcus aureus* (VRSA) infection; Western equine encephalitis virus disease, neuroinvasive and nonneuroinvasive; and yellow fever were reported in 2008. Data on chronic hepatitis B and hepatitis C virus infection (past or present) are not included because they are undergoing data quality review. Data on human immunodeficiency virus (HIV) infections are not included because HIV infection reporting has been implemented on different dates and using different methods than for AIDS case reporting.

Background

The infectious diseases designated as notifiable at the national level during 2008 are listed in this section. A notifiable disease is one for which regular, frequent, and timely information regarding individual cases is considered necessary for the prevention and control of the disease. A brief history of the reporting of nationally notifiable infectious diseases in the United States is available at http://www.cdc.gov/ncphi/disss/nndss/nndsshis.htm. In 1961, CDC assumed responsibility for the collection and publication of data on nationally notifiable diseases. NNDSS is neither a single surveillance system nor a method of reporting. Certain NNDSS data are reported to CDC through separate surveillance information systems and through different reporting mechanisms; however, these data are aggregated and compiled for publication purposes.

Notifiable disease reporting at the local level protects the public's health by ensuring the proper identification and follow-up of cases. Public health workers ensure that persons who are already ill receive appropriate treatment; trace contacts who need vaccines, treatment, quarantine, or education; investigate and halt outbreaks; eliminate environmental hazards; and close premises where spread has occurred. Surveillance of notifiable conditions helps public health authorities to monitor the impact of notifiable conditions, measure disease trends, assess the effectiveness of control and prevention measures, identify populations or geographic areas at high risk, allocate resources appropriately, formulate prevention strategies, and develop public health policies. Monitoring surveillance data enables public health authorities to detect sudden changes in disease occurrence and distribution, identify changes in agents and host factors, and detect changes in health-care practices.

The list of nationally notifiable infectious diseases is revised periodically. A disease might be added to the list as a new pathogen emerges, or a disease might be deleted as its incidence declines. Public health officials at state health departments and CDC collaborate in determining which diseases should be nationally notifiable. CSTE, with input from CDC, makes recommendations annually for additions and deletions. Although disease reporting is mandated by legislation or regulation at the state and local levels, state reporting to CDC is voluntary. Reporting completeness of notifiable diseases is highly variable and related to the condition or disease being reported (*1*). The list of diseases considered notifiable varies by state and year. Current and historic national public health surveillance case definitions used for classifying and enumerating cases consistently across reporting jurisdictions are available at http://www.cdc.gov/ncphi/disss/nndss/nndsshis.htm.

Infectious Diseases Designated as Notifiable at the National Level during 2008*

Acquired immunodeficiency syndrome (AIDS)
Anthrax
Domestic arboviral diseases, neuroinvasive and nonneuroinvasive
  California serogroup virus
  Eastern equine encephalitis virus
  Powassan virus
  St. Louis encephalitis virus
  West Nile virus
  Western equine encephalitis virus
Botulism
  foodborne
  infant
  other (wound and unspecified)
Brucellosis
Chancroid
Chlamydia trachomatis infections
Cholera
Coccidioidomycosis†
Cryptosporidiosis
Cyclosporiasis
Diphtheria
Ehrlichiosis/Anaplasmosis†
  Ehrlichia chaffeensis
  Ehrlichia ewingii
  Anaplasma phagocytophilum
  Undetermined
Giardiasis
Gonorrhea
Haemophilus influenzae, invasive disease
Hansen disease (Leprosy)
Hantavirus pulmonary syndrome
Hemolytic uremic syndrome, post-diarrheal
Hepatitis, viral, acute
  Hepatitis A, acute
  Hepatitis B, acute
  Hepatitis B virus, perinatal infection
  Hepatitis C, acute
Hepatitis, viral, chronic
  Chronic Hepatitis B
  Hepatitis C virus infection (past or present)
Human Immunodeficiency Virus infection
  Adult (age ≥13 yrs)
  Pediatric (age <13 yrs)
Influenza-associated pediatric mortality
Legionellosis
Listeriosis
Lyme disease†
Malaria
Measles
Meningococcal disease
Mumps†
Novel influenza A virus infections
Pertussis
Plague
Poliomyelitis, paralytic
Poliovirus infection, nonparalytic
Psittacosis
Q fever†
  acute
  chronic
Rabies
  animal
  human
Rocky Mountain spotted fever†
Rubella
Rubella, congenital syndrome
Salmonellosis
Severe acute respiratory syndrome-associated coronavirus (SARS-CoV) disease
Shiga toxin-producing *Escherichia coli* (STEC)
Shigellosis
Smallpox
Streptococcal disease, invasive, Group A
Streptococcal toxic-shock syndrome
Streptococcus pneumoniae, drug resistant, all ages, invasive disease
Streptococcus pneumoniae, invasive disease non-drug resistant, in children aged <5 years
Syphilis
Syphilis, congenital
Tetanus
Toxic-shock syndrome (other than streptococcal)
Trichinellosis
Tuberculosis
Tularemia
Typhoid fever
Vancomycin-intermediate *Staphylococcus aureus* infection (VISA)
Vancomycin-resistant *Staphylococcus aureus* infection (VRSA)
Varicella (morbidity)
Varicella (mortality)
Vibriosis
Yellow fever

* Position Statements the Council of State and Territorial Epidemiologists approved in 2007 for national surveillance were implemented beginning in January 2008. No new conditions were added to the Notifiable disease list in 2008
† Revised national surveillance case definition.

Data Sources

Provisional data concerning the reported occurrence of nationally notifiable infectious diseases are published weekly in *MMWR*. After each reporting year, staff in state health departments finalize reports of cases for that year with local or county health departments and reconcile the data with reports previously sent to CDC throughout the year. These data are compiled in final form in the *Summary*.

Notifiable disease reports are the authoritative and archival counts of cases. They are approved by the appropriate chief epidemiologist from each submitting state or territory before being published in the *Summary*. Data published in *MMWR Surveillance Summaries* or other surveillance reports produced by CDC programs might not agree exactly with data reported in the annual *Summary* because of differences in the timing of reports, the source of the data, or surveillance methodology.

Data in the *Summary* were derived primarily from reports transmitted to CDC from health departments in the 50 states, five territories, New York City, and the District of Columbia. Data were reported for *MMWR* weeks 1–53, which correspond to the period for the week ending January 5, 2008, through the week ending January 3, 2009. More information regarding infectious notifiable diseases, including case definitions, is available at http://www.cdc.gov/ncphi/disss/nndss/nndsshis.htm. Policies for reporting notifiable disease cases can vary by disease or reporting jurisdiction. The case-status categories used to determine which cases reported to NNDSS are published by disease or condition and are listed in the print criteria column of the 2008 NNDSS event code list (available at http://www.cdc.gov/ncphi/disss/nndss/phs/files/NNDSS_event_code_list_January_2008.pdf).

Final data for certain diseases are derived from the surveillance records of the CDC programs listed below. Requests for further information regarding these data should be directed to the appropriate program.

Office of Surveillance, Epidemiology and Laboratory Services (Proposed)

National Center for Health Statistics (NCHS)

Office of Vital and Health Statistics Systems (deaths from selected notifiable diseases).

Office of Infectious Diseases (Proposed)

National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP).

Division of HIV/AIDS Prevention (AIDS and HIV infection)

Division of STD Prevention (chancroid; *Chlamydia trachomatis*, genital infection; gonorrhea; and syphilis)

Division of Tuberculosis Elimination (tuberculosis)

National Center for Immunization and Respiratory Diseases

Influenza Division (influenza-associated pediatric mortality).

Division of Viral Diseases, (poliomyelitis, varicella [morbidity and deaths], and SARS-CoV).

National Center for Emerging and Zoonotic Infectious Diseases (Proposed)

Division of Vector-Borne Diseases (arboviral diseases).

Division of Viral and Rickettsial Diseases (animal rabies).

Population estimates for the states are from the NCHS bridged-race estimates of the July 1, 2000–July 1, 2007 U.S. resident population from the vintage 2007 postcensal series by year, county, age, sex, race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. This data set was released on August 16, 2007, and is available at http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm. Populations for territories are 2007 estimates from the U.S. Census Bureau International Data Base, available at http://www.census.gov/ipc/www/idb/summaries.html. The choice of population denominators for incidence reported in *MMWR* is based on 1) the availability of census population data at the time of preparation for publication and 2) the desire for consistent use of the same population data to compute incidence reported by different CDC programs. Incidence in the *Summary* is calculated as the number of reported cases for each disease or condition divided by either the U.S. resident population for the specified demographic population or the total U.S. resident population, multiplied by 100,000. When a nationally notifiable disease is associated with a specific age restriction, the same age restriction is applied to the population in the denominator of the incidence calculation. In addition, population data from states in which the disease or condition was not notifiable or was not available were excluded from incidence calculations. Unless otherwise stated, disease totals for the United States do not include data for American Samoa, Guam, Puerto Rico, the Commonwealth of the Northern Mariana Islands, or the U.S. Virgin Islands.

Interpreting Data

Incidence data in the *Summary* are presented by the date of report to CDC as determined by the *MMWR* week and year assigned by the state or territorial health department, except for the domestic arboviral diseases, which are presented by date of diagnosis. Data are reported by the state in which the patient resided at the time of diagnosis. For certain nationally notifiable infectious diseases, surveillance data are reported independently to different CDC programs. For this reason, surveillance data reported by other CDC programs might vary

from data reported in the *Summary* because of differences in 1) the date used to aggregate data (e.g., date of report or date of disease occurrence), 2) the timing of reports, 3) the source of the data, 4) surveillance case definitions, and 5) policies regarding case jurisdiction (i.e., which state should report the case to CDC).

The data reported in the *Summary* are useful for analyzing disease trends and determining relative disease burdens. However, reporting practices affect how these data should be interpreted. Disease reporting is likely incomplete, and completeness might vary depending on the disease and reporting state. The degree of completeness of data reporting might be influenced by the diagnostic facilities available; control measures in effect; public awareness of a specific disease; and the resources, and priorities of state and local officials responsible for disease control and public health surveillance. Finally, factors such as changes in methods for public health surveillance, introduction of new diagnostic tests, or discovery of new disease entities can cause changes in disease reporting that are independent of the true incidence of disease.

Public health surveillance data are published for selected racial/ethnic populations because these variables can be risk markers for certain notifiable diseases. Race and ethnicity data also can be used to highlight populations for focused prevention efforts. However, caution must be used when drawing conclusions from reported race and ethnicity data. Different racial/ethnic populations might have different patterns of access to health care, potentially resulting in data that are not representative of actual disease incidence among specific racial/ethnic populations. Surveillance data reported to NNDSS are in either individual case-specific form or summary form (i.e., aggregated data for a group of cases). Summary data often lack demographic information (e.g., race); therefore, the demographic-specific rates presented in the *Summary* might be underestimated.

In addition, not all race and ethnicity data are collected or reported uniformly for all diseases, the standards for race and ethnicity have changed over time, and the transition in implementation to the newest race and ethnicity standard has taken varying amounts of time for different CDC surveillance systems. For example, in 1990, the National Electronic Telecommunications System for Surveillance (NETSS) was established to facilitate data collection and submission of case-specific data to CDC's National Notifiable Diseases Surveillance System, except for selected diseases. In 1990, NETSS implemented the 1977 Office of Management and Budget (OMB) standard for race and ethnicity, in which race and ethnicity were collected in one variable. Other surveillance programs implemented two variables for collection of race and ethnicity data. The 1997 OMB race and ethnicity standard, which requires collection of multiple races per person using multiple race variables, should have been implemented by federal programs beginning January 1, 2003. In 2003, the CDC Tuberculosis and HIV/AIDS programs were able to update their surveillance systems to implement 1997 OMB standards. In 2005 the STD*MIS system was also updated to implement the 1997 OMB standards. In 2003, the CDC's Division of Tuberculosis Elimination was able to update the Tuberculosis Information Management System (TIMS) to implement the 1997 OMB race/ethnicity standards. However, in 2003, other diseases that constitute NETSS were undergoing a major change in the manner in which data were collected and reported to CDC. This change is known as the transition from NETSS to the National Electronic Disease Surveillance System (NEDSS). NEDSS implemented the newer 1997 OMB standard for race and ethnicity. However, the transition from NETSS to NEDSS was slower than originally expected relative to reporting data to CDC using NEDSS and hence some data are currently reported to CDC using NETSS and NEDSS formats, even if the data in the reporting jurisdictions are collected using NEDSS. Until the transition to NEDSS is complete, race and ethnicity data collected or reported to NETSS using different race and ethnicity standards will need to be converted to one standard. The data are now converted to the 1977 OMB standard originally implemented in NETSS.

Although the recommended standard for classifying a person's race or ethnicity is based on self-reporting, this procedure might not always be followed.

Transition in NNDSS Data Collection and Reporting

Before 1990, data were reported to CDC as cumulative counts rather than individual case reports. In 1990, states began electronically capturing and reporting individual case reports without personal identifiers to CDC by using NETSS. In 2001, CDC launched NEDSS, now a component of the Public Health Information Network, to promote the use of data and information system standards that advance the development of efficient, integrated, and interoperable surveillance information systems at the local, state, and federal levels. One of the objectives of NEDSS is to improve the accuracy, completeness, and timeliness of disease reporting at the local, state, and national level. CDC has developed the NEDSS Base System (NBS), a public health surveillance information system adopted by 16 states; 31 states have their own NEDSS-compatible based system, and three in the final stage of adoption. A major feature of all NEDSS compatible

solutions, which includes NBS, is the ability to capture data already in electronic form (e.g., electronic laboratory results, which are needed for case confirmation) rather than enter these data manually as in NETSS. In 2008, 16 states used NBS to transmit nationally notifiable infectious diseases to CDC, 24 states used a NEDSS-compatible based system, and the remaining states and territorial jurisdictions continued to use the NETSS or other applications. Additional information concerning NEDSS is available at http://www.cdc.gov/phin/activities/applications-services/nedss/index.html.

Methodology for Identifying which Nationally Notifiable Infectious Diseases are Reportable

States and jurisdictions are sovereign entities. Reportable conditions are determined by laws and regulations of each state and jurisdiction. It is possible that some conditions deemed nationally notifiable might not be reportable in certain states or jurisdictions. Determining which nationally notifiable infectious diseases are reportable in National Notifiable Diseases Surveillance System (NNDSS) reporting jurisdictions was determined by analyzing results of the 2008 State Reportable Conditions Assessment (SRCA). This assessment solicited information from each NNDSS reporting jurisdiction (all 50 U.S. states, the District of Columbia, New York City, and five U.S. territories) regarding which public health conditions were reportable for more than 6 months in 2008 by clinicians, laboratories, hospitals, or "other" public health reporters, as mandated by law or regulation. In 2008, to assist in the implementation of the SRCA, the NNDSS program provided technical assistance to the Council of State and Territorial Epidemiologists (CSTE).

In 2007, SRCA became the first collaborative project of such technical magnitude ever conducted by CSTE and CDC. Previously, CDC and CSTE had gathered public health reporting requirements independently. The 2008 SRCA collected information regarding whether each reportable condition was 1) explicitly reportable (i.e., listed as a specific disease or as a category of diseases on reportable disease lists), 2) whether it was implicitly reportable (i.e., included in a general category of the reportable disease list, such as "rare diseases of public health importance"), or 3) not reportable. Only explicitly reportable conditions were considered reportable for the purpose of national public health surveillance and thus reflected in the NNDSS. Moreover, to determine whether a condition included in the SRCA was reportable across all public health reporter categories and for a specific nationally notifiable infectious disease (NNID) in a reporting jurisdiction, CDC developed and applied a condition algorithm and a results algorithm to run on the data collected in the SRCA. Analyzed results of the 2008 SRCA were used to determine whether a NNID was not reportable in a reporting jurisdiction in 2008 and thus noted with an "N" indicator (for "not reportable") in the front tables of this report.

Unanalyzed results from the 2007 and 2008 SRCA are available using CSTE's web query tool, at http://www.cste.org/dnn/programsandactivities/publichealthinformatics/statereportableconditionsqueryresults/tabid/261/default.aspx.

Revised International Health Regulations

In May 2005, the World Health Assembly adopted revised International Health regulations (IHR) (*2*) that went into effect in the United States on July 18, 2007. This international legal instrument governs the role of the World Health Organization (WHO) and its member countries, including the United States, in identifying, responding to, and sharing information about Public Health Emergencies of International Concern (PHEIC). A PHEIC is an extraordinary event that 1) constitutes a public health risk to other countries through international spread of disease, and 2) potentially requires a coordinated international response.

The IHR are designed to prevent and protect against the international spread of diseases while minimizing the effect on world travel and trade. Countries that have adopted these rules have a much broader responsibility to detect, respond to, and report public health emergencies that potentially require a coordinated international response in addition to taking preventive measures. The IHR will help countries work together to identify, respond to, and share information about PEHIC.

The revised IHR represent a conceptual shift from a predefined disease list to a framework of reporting and responding to events on the basis of an assessment of public health criteria, including seriousness, unexpectedness, and international travel and trade implications. PHEIC are events that fall within those criteria (further defined in a decision algorithm in Annex 2 of the revised IHR). Four conditions always constitute a PHEIC and do not require the use of the IHR decision instrument in Annex 2: Severe Acute Respiratory Syndrome (SARS), smallpox, poliomyelitis caused by wild-type poliovirus, and human influenza caused by a new subtype. Any other event requires the use of the decision algorithm in Annex 2 of the IHR to determine if it is a potential PHEIC. Examples of events that require the use of the decision instrument include, but are not

limited to, cholera, pneumonic plague, yellow fever, West Nile fever, viral hemorrhagic fevers, and meningococcal disease. Other biologic, chemical, or radiologic events might fit the decision algorithm and also must be reportable to WHO. All WHO member states are required to notify WHO of a potential PHEIC. WHO makes the final determination about the existence of a PHEIC.

Health-care providers in the United States are required to report diseases, conditions, or outbreaks as determined by local, state, or territorial law and regulation, and as outlined in each state's list of reportable conditions. All health-care providers should work with their local, state, and territorial health agencies to identify and report events that might constitute a potential PHEIC occurring in their location. U.S. State and Territorial Departments of Health have agreed to report information about a potential PHEIC to the most relevant federal agency responsible for the event. In the case of human disease, the U.S. State or Territorial Departments of Health will notify CDC rapidly through existing formal and informal reporting mechanisms (*3*). CDC will further analyze the event based on the decision algorithm in Annex 2 of the IHR and notify the U.S. Department of Health and Human Services (DHHS) Secretary's Operations Center (SOC), as appropriate.

DHHS has the lead role in carrying out the IHR, in cooperation with multiple federal departments and agencies. The HHS SOC is the central body for the United States responsible for reporting potential events to WHO. The United States has 48 hours to assess the risk of the reported event. If authorities determine that a potential PHEIC exists, the WHO member country has 24 hours to report the event to WHO.

An IHR decision algorithm in Annex 2 has been developed to help countries determine whether an event should be reported. If any two of the following four questions can be answered in the affirmative, then a determination should be made that a potential PHEIC exists and WHO should be notified:

- Is the public health impact of the event serious?
- Is the event unusual or unexpected?
- Is there a significant risk of international spread?
- Is there a significant risk of international travel or trade restrictions?

Additional information concerning IHR is available at http://www.who.int/csr/ihr/en, http://www.globalhealth.gov/ihr/index.html, http://www.cdc.gov/cogh/ihregulations.htm, and http://www.cste.org/PS/2007ps/2007psfinal/ID/07-ID-06.pdf.

At its annual meeting in June 2007, the Council of State and Territorial Epidemiologists (CSTE) approved a position statement to support the implementation of the IHR in the United States (*3*). CSTE also approved a position statement in support of the 2005 IHR adding initial detections of novel influenza A virus infections to the list of nationally notifiable diseases reportable to NNDSS, beginning in January 2007 (*4*).

1. Doyle TJ, Glynn MK, Groseclose LS. Completeness of notifiable infectious disease reporting in the United States: an analytical literature review. Am J Epidemiol 2002;155:866–74.
2. World Health Organization. Third report of Committee A. Annex 2. Geneva, Switzerland: World Health Organization; 2005. Available at http://www.who.int/gb/ebwha/pdf_files/WHA58/A58_55-en.pdf.
3. Council of State and Territorial Epidemiologists. Events that may constitute a public health emergency of international concern. Position statement 07-ID-06. Available at http://www.cste.org/PS/2007ps/2007psfinal/ID/07-ID-06.pdf.
4. Council of State and Territorial Epidemiologists. National reporting for initial detections of novel influenza A viruses. Position statement 07-ID01. Available at http://www.cste.org/PS/2007ps/2007psfinal/ID/07-ID-06.pdf.

Highlights for 2008

Below are summary highlights for certain national notifiable diseases. Highlights are intended to assist in the interpretation of major occurrences that affect disease incidence or surveillance trends (e.g., outbreaks, vaccine licensure, or policy changes).

AIDS

Since 1981, confidential name-based AIDS surveillance has been the cornerstone of national, state, and local efforts to monitor the scope and impact of the human immunodeficiency virus (HIV) epidemic. The data have multiple uses, including the development of policy to help prevent and control AIDS. However, because of the introduction of therapies that effectively slow the progression of HIV infection, AIDS data no longer adequately represent the populations affected by the epidemic. By helping public health practitioners understand the epidemic at an earlier stage, combined HIV and AIDS data better represent the overall impact of HIV. As of April 2008, all 50 states, the District of Columbia, and five U.S. territories had implemented confidential name-based HIV surveillance into their AIDS surveillance systems; names or other personal identifying information are not reported to CDC.

Botulism

Botulism is a severe paralytic illness caused by toxins produced by *Clostridium botulinum*. Exposure to toxin can occur by ingestion (foodborne botulism) or by in situ production from *C. botulinum* colonization of a wound (wound botulism) or the gastrointestinal tract (infant botulism and adult intestinal colonization botulism) (*1*). CDC maintains intensive surveillance for cases of botulism in the United States with a 24 hour/7 day a week consultation service. Health-care providers should report suspected botulism cases immediately to their state health departments; all states maintain 24-hour telephone services for reporting of botulism and other public health emergencies. Additional emergency consultation is available from the CDC botulism duty officer via the CDC Emergency Operations Center, telephone 660-488-7100. In 2008, cases were attributed to foodborne botulism, wound botulism, infant botulism, and unknown forms of botulism.

1. Sobel J. Botulism. Clin Infect Dis 2005;41:1167–73.

Brucellosis

The incidence of brucellosis in the United States increased from 2003 until 2007. The number of reported cases in 2008 decreased 36.0% from the previous year. Overall, the demographic characteristics of persons with brucellosis remained stable. For patients for whom ethnicity was identified, 62.3% were Hispanic. The majority of cases were reported in the Southwest.

In the U.S. animal population, brucellosis eradication efforts continue. In 2008, the U.S. Department of Agriculture declared Texas a brucellosis Class Free state. Montana was reclassified as a Class A state following the report of a second brucellosis-affected herd within 2 years (*1*). In total, 49 states and three territories were classified as brucellosis Class Free states at the end of 2008 (*1*). *Brucella abortus* remains enzootic in elk and bison in the greater Yellowstone National Park area, and *Brucella suis* is enzootic in feral swine in the Southeast.

Risk factors associated with brucellosis include the consumption of unpasteurized milk or soft cheeses. The risk for brucellosis from domestic dairy products is low. Unpasteurized dairy products from countries with endemic brucellosis remains a source of brucellosis for immigrants and travelers. Hunters are at an elevated risk for contracting brucellosis from the carcass or meat of infected animals. In addition, exposure to *Brucella* spp. can occur in diagnostic and research laboratories because of the potential for aerosol transmission (*2*). For the same reason, biosafety level 3 practices, containment, and equipment are recommended for laboratory manipulation of isolates (*3*). In the event of an exposure, postexposure prophylaxis can effectively prevent illness (*4*). CDC provides recommendations for laboratory exposures and can assist with the serologic monitoring of laboratory workers who are affected.

1. Donch DA, Gertonson AA, Rhyan JH, Gilsdorf MJ. Status report—fiscal year 2007 cooperative state-federal Brucellosis Eradication Program. Washington, DC: US Department of Agriculture; 2008. Available at http://www.aphis.usda.gov/animal_health/animal_diseases/brucellosis/downloads/yearly_rpt.pdf.
2. CDC. Bioterrorism agents/diseases, by category. Atlanta, GA: US Department of Health and Human Services, CDC; 2006. Available at http://www.bt.cdc.gov/agent/agentlist-category.asp#adef.
3. CDC, National Institutes of Health. Biosafety in microbiological and biomedical laboratories (BMBL). 5th ed. Washington, DC: US Department of Health and Human Services, CDC, National Institutes of Health; 2007. Available at http://www.cdc.gov/OD/OHS/biosfty/bmbl5/bmbl_5th_edition.pdf.
4. CDC. Laboratory-acquired brucellosis—Indiana and Minnesota, 2006. MMWR 2008;57:39–42.

Cholera

Cases of cholera continue to be rare in the United States. Cases reported in 2008 were fewer than the average number of cases per year reported during 2003–2007 (mean: 6.8) (*1*). Foreign travel continues to be the primary source of illness for cholera in the United States. Cholera remains a global threat to health, particularly in areas with poor access to improved water and sanitation, such as sub-Saharan Africa (*2,3*). The single

patient with domestic exposure in 2008 ate crab harvested from the U.S. Gulf Coast. Other serogroups of toxin-producing *Vibrio cholerae* (e.g., O141 and O75) also have caused severe diarrhea in patients who have a history of consumption of seafood from the Gulf Coast (*4*).

1. Steinberg EB, Greene KD, Bopp CA, Cameron DN, Wells JG, Mintz ED. Cholera in the United States, 1995–2000: trends at the end of the twentieth century. J Infect Dis 2001;184:799–802.
2. Gaffga NH, Tauxe RV, Mintz ED. Cholera: a new homeland in Africa. Am J Trop Med Hyg 2007;77:705–13.
3. Mintz ED, Guerrant RL. A lion in our village – the unconscionable tragedy of cholera in Africa. New Engl J Med 2009;360:1061–3.
4. Tobin-D'Angelo M, Smith AR, Bulens SN, et al. Severe diarrhea caused by cholera toxin–producing *Vibrio cholerae* serogroup O75 infections acquired in the southeastern United States. Clin Infect Dis 2008;47:1035–40.

Coccidioidomycosis

Coccidioidomycosis is a common cause of community-acquired fungal pneumonia in disease-endemic areas of the southwest United States; however, clinical suspicion and laboratory testing occur infrequently (*1*). Fungal conidia survive in the soil and are propagated in an airborne manner, particularly when soil is disrupted. In the southwest United States, alkaline soil and climate support coccidioidomycosis growth and propagation. In recent years, strategies to model the effects of climate on disease incidence have begun, which include linking changes in incidence to climatic change, particularly in the region where the disease is endemic (*2–4*).

Case counts decreased for the first time in a decade during 2007. In 2008, reported coccidioidomycosis cases in the United States decreased again, primarily because of fewer reports received from the disease-endemic states of California and, to a lesser extent, Arizona. Case counts decreased even after the case definition revision implemented by the Council of State and Territorial Epidemiologists in 2007 included less stringent diagnostic criteria.

In 2009, certain laboratories in Arizona, where approximately 60% of coccidioidomycosis cases in the United States occur, modified their reporting criteria to include all cases with a positive enzyme immunoassay without confirmation by immunodiffusion assay. As a result, case counts in Arizona might increase during 2009; however, such an increase can be attributed to a less stringent case definition.

1. Valdivia L, Nix D, Wright M, et al. Coccidioidomycosis as a common cause of community-acquired pneumonia. Emerg Infect Dis 2006;12:958–62.
2. Park B, Sigel K, Vaz V, et al. An epidemic of coccidioidomycosis in Arizona associated with climatic changes, 1998–2001. J Infect Dis 2005;191:1981–7.
3. Comrie AC. Climate factors influencing coccidioidomycosis seasonality and outbreaks. Environ Health Perspect 2005;113:688–92.
4. Kolivras KN, Comrie AC. Modeling valley fever (coccidioidomycosis) incidence on the basis of climate condition. Int J Biometeorol 2003;47:87–101.

Cryptosporidiosis

The number of cryptosporidiosis cases reported to CDC increased during 2005–2007. Despite a decrease in the number of cases reported in 2008, cryptosporidiosis incidence was approximately threefold greater compared with 2004.

As in previous years, cryptosporidiosis case reports were influenced by outbreaks, particularly those associated with treated recreational water. Although cryptosporidiosis affects persons in all age groups, the number of reported cases occurred more frequently among children aged 1–9 years. A tenfold increase in transmission of cryptosporidiosis occurred during summer through early fall, coinciding with increased use of recreational water by younger children, which is a known risk factor for cryptosporidiosis. *Cryptosporidium* oocysts can be detected routinely in treated recreational water (*1*). Contamination of, and the subsequent transmission through, recreational water is facilitated by the substantial number of *Cryptosporidium* oocysts that can be shed by a single person; the extended time that oocysts can be shed (*2*); the low infectious dose (*3*); the resistance of *Cryptosporidium* oocysts to chlorine (*4*); and the prevalence of improper pool maintenance (i.e., insufficient disinfection, filtration, and recirculation of water), particularly of children's wading pools (*5*). The application of molecular epidemiology (i.e., genotyping and subtyping *Cryptosporidium* specimens) to clinical and environmental samples has demonstrated potential to expand our knowledge of *Cryptosporidium* epidemiology (*6*). In 2008, CDC partnered with state and local health professionals to release Cryptosporidiosis Outbreak and Response Evaluation (CORE) guidelines (http://www.cdc.gov/crypto/resources/core_guidelines.pdf) that health departments, aquatic facilities, and child care programs can implement to reduce the risk of community-wide spread.

1. Shields JM, Gleim ER, Beach MJ. Prevalence of *Cryptosporidium* spp. and *Giardia intestinalis* in swimming pools, Atlanta, Georgia. Emerg Infect Dis 2008;14:948–50.
2. Chappell CL, Okhuysen PC, Sterling CR, DuPont HL. *Cryptosporidium parvum*: intensity of infection and oocyst excretion patterns in healthy volunteers. J Infect Dis 1996;173:232–6.
3. DuPont HL, Chappell CL, Sterling CR, Okhuysen PC, Rose JB, Jakubowski W. The infectivity of *Cryptosporidium parvum* in healthy volunteers. N Engl J Med 1995;332:855–9.
4. Shields JM, Hill VR, Arrowood MJ, Beach MJ. Inactivation of *Cryptosporidium parvum* under chlorinated recreational water conditions. J Water Health. 2008;6:513–20.
5. CDC. Surveillance data from swimming pool inspections—selected states and counties, United States, May–September 2002. MMWR 2003;52:513–6.
6. Xiao L. Molecular epidemiology of cryptosporidiosis: an update. Exp Parasitol 2009 April 7 [Epub ahead of print].

Domestic Arboviral, Neuroinvasive and Nonneuroinvasive (West Nile virus disease)

During 2008, West Nile virus (WNV) disease cases were reported from 45 states and the District of Columbia, including 27 counties that had not reported cases previously. Nationally, the reported incidence of West Nile neuroinvasive disease (WNND) was 0.2 cases per 100,000 population, which is lower than that reported in the previous 4 years during 2004–2007 (median: 0.4, range: 0.4-0.5). The highest incidence of WNND continued to occur in western and central states.

In 2008, CDC, the Food and Drug Administration (FDA), and state health departments investigated an increase in false-positive test results obtained with a commercially available WNV test kit (*1*). The investigation revealed that one particular kit lot was the source of the false-positive results, and that lot was recalled. Among specimens that tested positive using the implicated kit lot that were retested at CDC, 72% were determined to be false-positive results. A higher false-positive percentage was found among patients without evidence of neuroinvasive disease (77%) than patients with evidence of neuroinvasive disease (47%). Commercially available WNV test kits should be used to determine a presumptive diagnosis of WNV neuroinvasive disease. These kits should not be used to test specimens from persons without compatible illness, and any positive result should be confirmed by additional testing at a state health department or CDC. Considering the large proportion of false-positives, CDC recommended that state health departments not classify patients as having WNV disease if the only laboratory evidence was from the recalled kit lot. States have since reevaluated affected cases to arrive at the final WNV disease totals for 2008.

1. CDC. False-positive results with a commercially available West Nile Virus immunoglobulin M assay—United States, 2008. MMWR 2009;58:458–60.

Ehrlichiosis and Anaplasmosis

Case definitions for these diseases were modified beginning in 2008 (*1*) to include a separate designation for *Ehrlichia ewingii* for better assessment and enumeration of these cases. Four categories of ehrlichiosis and anaplasmosis were reportable during 2008: 1) *Ehrlichia chaffeensis*, 2) *Ehrlichia ewingii*, 3) *Anaplasma phagocytophilum*, and 4) Human ehrlichiosis/anaplasmosis - undetermined. Infection caused by *E. chaffeensis* was reported primarily from the lower Midwest and the Southeast, reflecting the range of the primary tick vector species (*Amblyomma americanum*). Infection caused by *A. phagocytophilum* was reported primarily from the upper Midwest and coastal New England, reflecting both the range of the primary tick vector species (*Ixodes scapularis*) and preferred animal hosts for tick feeding. Four central U.S. states and Delaware reported nine confirmed cases of *E. ewingii* infection. The category "Human ehrlichiosis/anaplasmosis - undetermined" includes cases for which a specific etiologic agent could not be identified using available serologic tests. The high number of "Human ehrlichiosis/anaplasmosis - undetermined" cases reported from some northern states (*2*) reflects state-specific classifications based on indistinguishable antigenic cross-reactivity or situations in which physicians, confused regarding the likely causative agent, ordered single or inappropriate tests (e.g., ordering only ehrlichiosis tests in a region where anaplasmosis would be expected to predominate).

During 2008, cases attributed to *E. chaffeensis* and *A. phagocytophilum* increased by 16% and 21%, respectively. Reported ehrlichiosis and anaplasmosis cases have increased every year since this group of diseases became notifiable in 1999. Increases in reported cases might be the result of several factors, including ecological changes influencing disease transmission, changes in diagnostic approaches that alter detection rates, or changes in surveillance and reporting. Changes in the case definition that became effective in January 2008 (*1*) also might have altered how cases were classified.

1. Council of State and Territorial Epidemiologists. Revision of the surveillance case definitions for Ehrlichiosis. Position statement 07-ID-03. Atlanta, GA: Council of State and Territorial Epidemiologists; 2007. Available at http://www.cste.org/position%20statements/searchbyyear-2007final.asp.
2. CDC. Anaplasmosis and Ehrlichiosis— Maine, 2008. MMWR 2009; 58:1033–6.

Hansen Disease (Leprosy)

The number of cases of Hansen disease (HD) reported in the United States peaked in 1985 and decreased until 2006. The number of reported cases increased in 2007 and decreased 26.6% in 2008. Cases were reported from 19 states and one territory; 70% of cases were reported from California, Florida, Hawaii, Texas, and New York City. HD is not highly transmissible; cases appear to be related predominantly to immigration from areas in which the disease is endemic. Information on access to clinical care is available at http://www.hrsa.gov/hansens.

Hemolytic Uremic Syndrome, Postdiarrheal

Hemolytic uremic syndrome (HUS) is characterized by the triad of hemolytic anemia, thrombocytopenia, and renal insufficiency. The most common etiology of HUS in the United

States is infection with Shiga toxin-producing *Escherichia coli*, principally *E. coli* O157:H7 (*1*). Approximately 6.3% of all persons infected with *E. coli* O157:H7, but 15.3% of children aged < 5 years, progress to HUS (*2*). During 2008, as usual, most reported cases occurred among children aged 1–4 years.

1. Banatvala N, Griffin PM, Greene KD, et al. The United States prospective hemolytic uremic syndrome study: microbiologic, serologic, clinical, and epidemiologic findings. J Infect Dis 2001;183:1063–70.
2. Gould L, Demma L, Jones TF, et al. Hemolytic uremic syndrome and death in persons with *Escherichia coli* O157:H7 infection, Foodborne Diseases Active Surveillance Network Sites, 2000–2006. Clin Infect Dis 2009;49:1480–5.

HIV Infection

As of April 2008, all 50 states, the District of Columbia, and five U.S. dependent areas have laws or regulations requiring confidential name-based reporting for human immunodeficiency virus (HIV) infection, in addition to reporting persons with AIDS. In 2008, CDC published a revised surveillance case definition for HIV infection that includes AIDS and incorporates the HIV infection classification (*1*). Laboratory-confirmed evidence of HIV infection is now required to meet the surveillance case definition for HIV infection, including stage 3 HIV infection, i.e., AIDS.

In 2002, CDC initiated a system to monitor HIV incidence; in 2003 this system was expanded. On the basis of extrapolations for the 22 states with HIV incidence surveillance, the estimated number of new HIV infections for the United States in 2006 was 56,300 (*2*).

1. CDC. Revised surveillance case definitions for HIV infection among adults, adolescents and children aged <18 months and for HIV infection and AIDS among children aged 18 months to <13 years—United States, 2008. MMWR 2008;57(No. RR-10).
2. Hall HI, Song, R, Rhodes P, et al. Estimation of HIV incidence in the United States. JAMA 2008;300:520–9.

Influenza-Associated Pediatric Mortality

In June 2004, the Council of State and Territorial Epidemiologists added influenza-associated pediatric mortality (i.e., among persons aged <18 years) to the list of conditions reportable to the National Notifiable Diseases Surveillance System. Cumulative year-to-date incidence is published each week in *MMWR* Table I for low-incidence nationally notifiable diseases.

A total of 90 cases of influenza-associated pediatric deaths were reported to CDC during 2008. Pediatric deaths reported during 2008 occurred during the 2006–07, 2007–08, and 2008–09 influenza seasons. In 2008, the median age at death was 5.6 years (range: 29 days–17.9 years). A total of 10 children (11%) were aged <6 months; 14 (16%) were aged 6–23 months; 19 (21%) were aged 24–59 months; and 47 (52%) were aged >5 years. Among all pediatric deaths reported in 2008, 56 (62%) children died after being admitted to the hospital, whereas 34 (38%) died in the emergency room or outside the hospital. Information on underlying or chronic medical conditions was reported for 82 children: 47 (57%) children had one or more underlying or chronic medical conditions, placing them at increased risk for influenza-associated complications. Fifty-one of the 90 children had specimens collected for bacterial culture from normally sterile sites and 15 (29%) were positive. *Staphylococcus aureus* was the most frequently reported bacterial pathogen in 2008 and was found in 13 (87%) of the 15 children with co-infections. Nine of the *Staphylococcus* isolates were methicillin-resistant and the remaining four were sensitive to methicillin. Of the 65 children aged >6 months for whom the vaccination status was known, nine had been vaccinated against influenza according to the 2008 Advisory Committee on Immunization Practices recommendations (*1*). Continued surveillance of influenza-related mortality is important to monitor the effects of influenza and the possible effect of interventions in children.

1. CDC. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2008; 57(No. RR-7):1–60.

Listeriosis

Listeriosis is a rare but severe infection caused by *Listeria monocytogenes*; it has been a nationally notifiable disease since 2000. Listeriosis is primarily foodborne and occurs most frequently among persons who are older, pregnant, or immunocompromised. During 2008, most cases occurred among persons aged ≥65 years.

Molecular subtyping of *L. monocytogenes* isolates and sharing that information through PulseNet has enhanced the ability of public health officials to detect and investigate outbreaks. Recent outbreaks have been linked to ready-to-eat deli meat (*1*) and unpasteurized cheese (*2*). During 2008, the incidence of listeriosis in FoodNet/active surveillance sites was 0.29 cases per 100,000 population, representing a decrease of 36% compared with 1996–1998; however, the incidence remained higher than at its lowest point in 2002 (*3*).

All clinical isolates should be submitted to state public health laboratories for pulsed-field gel electrophoresis pattern determination, and all persons with listeriosis should be interviewed by a public health official or health-care provider using a standard *Listeria* case form, available at http://www.cdc.gov/national/surveillance/listeria_surveillance.html. Rapid analysis of surveillance data will allow identification of possible food sources of outbreaks.

1. Gottlieb SL, Newbern EC, Griffin PM, et al. Multistate outbreak of listeriosis linked to turkey deli meat and subsequent changes in US regulatory policy. Clin Infect Dis 2006;42:29–36.
2. MacDonald PDM, Whitwam RE, Boggs JD, et al. Outbreak of listeriosis among Mexican immigrants caused by illicitly produced Mexican-style cheese. Clin Infect Dis 2005;40:677–82.
3. CDC. Preliminary FoodNet data on the incidence of infection with pathogens transmitted commonly through food—10 states, 2008. MMWR 2009;58:333–7.
4. Outbreak of *Listeria monocytogenes* Infections associated with pasteurized milk from a local dairy—Massachusetts, 2007. MMWR 2008;57:1097–1100.

Lyme Disease

In January 2008, a CSTE-approved revised national surveillance case definition was implemented. The purpose of the revision was to permit states and territories to report confirmed and probable cases of Lyme disease to the National Notifiable Diseases Surveillance System in accordance with the 2007 CSTE position statement template, update the criteria for laboratory evidence of infection to reflect current testing practices, and provide measures to assess the public health surveillance burden. Because of the modifications to the classification of a confirmed case and criteria for laboratory evidence and addition of probable cases to the total case count, the total and confirmed case counts from 2008 are not directly comparable to total case counts reported in previous years. The revised surveillance case definition can be accessed at http://www.cdc.gov/ncphi/disss/nndss/casedef/lyme_disease_2008.htm.

Measles

As in recent years, the majority (125) of confirmed measles cases in 2008 were import-associated (*1*). Twenty-five cases were internationally imported, including 13 in U.S. residents who had acquired measles while traveling abroad and 12 in non-U.S. residents who had acquired the disease abroad before traveling to the United States. Importations came from 12 countries, many of which are within the WHO European Region. Other import-associated cases included 29 cases with a direct link to an imported case, 22 imported virus cases (i.e., cases that cannot be linked epidemiologically to an imported case, but for which imported virus has been isolated), and 49 cases with link to virus-only cases. The sources of infection for the remaining 15 cases were classified as unknown because no link to importation was found.

Of the 127 U.S. residents with measles in 2008, 7 were vaccinated, 21 had unknown vaccination histories, and 99 were not vaccinated. Of the 99 cases in unvaccinated U.S. residents: 67% were among persons unvaccinated because of their personal or religious beliefs. Fourteen cases occurred among children unvaccinated because of missed opportunity, delayed vaccination, or unknown reasons. This group included mostly children aged 12–15 months, who had not been vaccinated, or older toddlers whose parents delayed vaccination but did not state any religious or personal objections to vaccination. Seventeen cases occurred in children too young to be vaccinated routinely, although two infants, aged 6 and 9 months, were traveling internationally and thus should have been vaccinated according to vaccination recommendations of the Advisory Committee for Immunization Practices (*2*). One case occurred in a person who was born before 1957, and therefore was considered to have evidence of immunity because of birth year (*2*).

Although still low, the number of measles cases reported during 2008 was the highest since 1996. The increase was not the result of a greater number of imported cases, but was the result of greater viral transmission after importation into the United States. The import-linked cases occurred largely among school-aged children who were eligible for vaccination but whose parents chose not to have them vaccinated (*3*). One study reported an increase in the number of vaccine exemptions among U.S. children who attend school in states that allow philosophical exemptions (*4*). In 2008, 41% of measles cases occurred among school-aged children and adolescents (aged 5–19 years). Seventeen children, including five aged <15 months, were hospitalized.

Nine outbreaks occurred in seven states, all with viral or epidemiologic evidence of an imported source. These outbreaks accounted for 74% of all cases. In four outbreaks, 50% of cases occurred among persons unvaccinated because of personal beliefs. Two such outbreaks involved home-schooled populations (*3*). In one 12-case outbreak among children with personal belief exemptions, 70 children exposed to a measles case were placed on voluntary home quarantine because parents declined vaccination or because they were too young to be vaccinated (*5*). In another outbreak, the majority of infections were acquired in hospitals or emergency rooms. This outbreak lasted over 2 months and 6 generations of spread. This outbreak included a case in an unvaccinated health-care worker who was infected in a hospital (*6*).

Although the elimination of endemic measles in the United States has been achieved, and population immunity remains high (*7*), outbreaks can occur when measles is introduced into susceptible groups, often at substantial cost to control (*8*). Measles can be prevented by adhering to recommendations for vaccinations, including guidelines for travelers (*2*, *9*).

1. Council of State and Territorial Epidemiologists. Revision of measles, rubella, and congenital rubella syndrome case classifications as part of elimination goals in the United States. Position statement 2006-ID-16. Available at http://www.cste.org/position%20statements/searchbyyear2006.asp.

2. CDC. Measles, mumps, and rubella—vaccine use and strategies for elimination of measles, rubella, congenital rubella syndrome and control of mumps: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1998;47(No. RR-8).
3. CDC. Measles— United States, January–July 2008. MMWR 2008;57:893–6.
4. Omer SB, Pan WKY, Halsey NA, et al. Nonmedical exemptions school immunization requirements: secular trends and association to state policies with pertussis incidence. JAMA 2006;296:1757–63.
5. CDC. Outbreak of measles—San Diego, California, January–February 2008. MMWR 2008;57:203–6.
6. Measles—United States, January 1–April 25, 2008. MMWR 2008;57: 494–8.
7. Hutchins SS, Bellini W, Coronado V, et al. Population immunity to measles in the United States. J Infect Dis 2004:189(Suppl 1):S91–7.
8. Parker AA, Staggs W, Dayan G, et al. Implications of a 2005 measles outbreak in Indiana for sustained elimination of measles in the United States. N Engl J Med 2006;355:447–55.
9. CDC. Preventable measles among U.S. residents, 2001–2004. MMWR 2005;54:817–20.

Mumps

Since mumps vaccine licensure in 1967, the number of cases of mumps in the United States declined steadily until 2006, when the largest mumps outbreak in >20 years occurred, with >6,000 reported cases (*1–4*). Following the resurgence of mumps in 2006, reported cases declined towards pre-resurgence levels with 800 cases in 2007 and 454 cases in 2008 (*5*). In response to the 2006 outbreak, the Advisory Committee on Immunization Practices (ACIP) updated criteria for mumps immunity and mumps vaccination recommendations (*5*). In 2007, the Council of State and Territorial Epidemiologists revised the mumps case definition by extending the case definition to include cases with mumps symptoms other than parotitis, by adding mumps virus nucleic acid detection to the laboratory criteria, and by making several changes to the case classification system (*6*). The revised case definition has been in effect since January 1, 2008.

In 2008, after a review of scientific evidence, ACIP, the Healthcare Infection Control Practices Advisory Committee, and the American Academy of Pediatrics recommended reducing, from 9 to 5 days, the period of isolation for persons with mumps in both health-care and community settings. All three groups now recommend a 5-day period of isolation after onset of parotitis, both for isolation of persons with mumps in either community or health-care settings and for use of standard precautions and droplet precautions. Among the rationale cited for these recommendations is the substantial reduction in viral secretion 5 days after onset of parotitis and the likelihood that much transmission in community settings occurs from persons with asymptomatic infection and, among persons with symptomatic disease, before the onset of parotitis. Postexposure recommendations remain unchanged. Health-care personnel with no evidence of mumps immunity who are exposed to patients with mumps should be excluded from duty from the 12th day after first exposure through the 26th day after last exposure (*7–8*).

1. CDC. Mumps epidemic—Iowa, 2006. MMWR 2006;55:366–8.
2. CDC. Update: multistate outbreak of mumps—United States, January 1–May 2, 2006. MMWR 2006;55:559–63.
3. CDC. Update: mumps activity—United States, January 1–October 7, 2006. MMWR 2006;55:1152–3.
4. Dayan G, Quinlisk P, Parker, A, et al. Recent resurgence of mumps in the United States. N Engl J Med 2008;358:1580–9.
5. Barskey AE, Glasser, JW, LeBaron CW. Mumps resurgence in the United States: A historical perspective on unexpected elements. Vaccine 2009; 27:6186–95.
6. CDC. Updated recommendations of the Advisory Committee on Immunization Practices (ACIP) for the control and elimination of mumps. MMWR 2006;55:629–30.
7. Council of State and Territorial Epidemiologists. Revision of the surveillance case definition for mumps 07-ID-02. Available at http://www.cste.org/PS/2007ps/2007psfinal/ID/07-ID-02.pdf.
8. CDC. Updated recommendations for isolation of persons with mumps. MMWR 2008;57:1103–5.

Pertussis

Although the incidence of reported pertussis has declined in the United States following the 2004 peak (8.9 per 100,000), overall incidence increased slightly during 2007 and 2008 (3.62 and 4.18 cases per 100,000, respectively). Infants aged <6 months, who are at greatest risk for severe disease and death, continued to have the highest reported rate of pertussis (79.41 per 100,000). However, adolescents (aged 10–19 years) and adults (aged >20 years) accounted for nearly half of reported cases in 2008, and the contribution of cases in persons aged 5–9 years appears to be increasing in comparison with previous years (20% of cases in 2008, 13% of cases in 2007, 10% in 2006). Adolescents and adults are critical age groups as they are thought to be a source of transmission of pertussis to young infants who are too young to be completely vaccinated. In 2005, a combined tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis vaccine (Tdap) was recommended for use among adolescents and adults (*1,2*). Although Tdap coverage among adolescents aged 13–17 years has increased from 10.8% in 2006 to 40.8% in 2008, the direct impact of Tdap is still unknown (*3,4*). Continued monitoring of disease trends through national surveillance will be important to assess both the direct impact of Tdap among target vaccine age groups and the indirect effects of vaccination on infants.

1. CDC. Preventing tetanus, diphtheria, and pertussis among adolescents: use of tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis vaccines: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2006;55(No. RR-3).
2. CDC. Preventing tetanus, diphtheria, and pertussis among adults: use of tetanus toxoid, reduced diphtheria toxoid and acellular pertussis vaccine: recommendations of the Advisory Committee on Immunization Practices (ACIP) and Recommendation of ACIP, supported by the Healthcare Infection Control Practices Advisory Committee (HICPAC), for use of Tdap among health-care personnel. MMWR 2006;55 (No. RR-17).

3. CDC. Vaccination coverage among adolescents aged 13–17 years– United States, 2006. MMWR 2007;56:885–8.
4. CDC. Vaccination coverage among adolescents aged 13–17 years—United States, 2008. MMWR 2009;58:997–1001.

Psittacosis

Psittacosis is a respiratory infection caused by the bacterium *Chlamydophila psittaci*. Once referred to as "parrot fever", psittacosis occurs through exposure to the feces, respiratory secretions, plumage, or tissues of infected birds and can lead to severe respiratory compromise in a minority of cases. In 2008, the incidence of reported cases of psittacosis continued to be low. Because of the recent development of improved molecular diagnostics for the detection of *C. psittaci* (*1*), a revised position statement by the Council of State and Territorial Epidemiologists and case definition for psittacosis is anticipated. Additional information about psittacosis and case reporting tools can be found at http://www.nasphv.org/documentsCompendiaPsittacosis.html.

1. Mitchell SL, Wolff BJ, Thacker WL, et al. Genotyping of *Chlamydophila psittaci* by real time PCR and high resolution melt analysis. J Clin Microbiol 2008;47:175–81.

Q Fever

The case definition for Q fever was modified beginning in 2008 (*1*) to include a separate designation for acute and chronic infection and to restrict designation of cases diagnosed by use of indirect immunofluorescent antibody assays to those minimally exhibiting IgG antibody titers ≥1:128. Among cases reported in 2008, 88% were identified as acute infection, whereas 12% were the result of chronic Q fever infection. In 2008, cases remained distributed across the United States, in keeping with the consideration that Q fever is considered enzootic in ruminants (sheep, goats, and cattle) throughout the country.

During 2008, cases of Q fever reported decreased by 30% from those reported for 2007, the largest decrease since reporting of cases of Q fever was initiated in 2000. This decrease likely reflects the more stringent case classification criteria in effect during 2008 (*1*) compared with the previous year. Although few human cases are reported annually, Q fever is believed to be substantially underreported because of its nonspecific presentation and the failure of physicians to suspect infection and request appropriate diagnostic tests.

1. Council of State and Territorial Epidemiologists. Revision of the surveillance case definitions for Q fever. Position statement 07-ID-04. Atlanta, GA: Council of State and Territorial Epidemiologists; 2007. Available at http://www.cste.org/position%20statements/searchbyyear2007final.asp.

Rabies

During 2008, two cases of human rabies were reported in the United States: an imported case from Mexico and an indigenous case in a 55-year-old male from Missouri. Epidemiologic investigations of these cases implicated bat rabies virus variants in both cases. The case from Mexico marked the first imported case of rabies reported as a rabies virus variant not associated with dogs in the origin country (*1*). During 2008, the majority (93%) of 6,841 animal rabies cases in the United States were reported in wild animal species. Overall, a 3% decrease in rabies cases was reported in animals in 2008 compared with 2007. In the United States, five groups of animals are recognized as reservoirs for various rabies virus variants over defined geographic regions: raccoons (eastern United States), bats (various species, all U.S. states except Hawaii), skunks (north central United States, south central United States, and California), foxes (Alaska, Arizona, and Texas), and mongoose (Puerto Rico) (*2*). A skunk rabies virus variant associated with spillover and adaptation of a big brown bat rabies virus was reported in Flagstaff, Arizona after nearly 2 years with no cases after wildlife vaccination campaigns were implemented in the area.

Reported cases of rabies in domestic animals remain low (7% of reported rabid animals) in part because of high vaccination rates and the elimination of dog-to-dog transmission, which was last reported in 2004. One case of canine rabies imported in a dog from Iraq was reported during 2008 (*3*). This case illustrates the continued challenge for the United States to remain canine rabies free. Public health education programs should target travelers and health-care providers regarding rabies prevention measures and the potential risk of rabies exposure in countries where the disease is endemic in domestic animals. In the United States, cats remained the most commonly reported domestic animal with rabies during 2008 (62% of reported rabid domestic animals).

Vaccination programs to control rabies in wild carnivores are ongoing through the distribution of baits containing an oral rabies vaccine in the eastern United States and Texas. Oral rabies vaccination programs in the eastern United States are targeted at preventing the westward spread of the raccoon rabies virus variant whereas programs in Texas are being maintained as a barrier to prevent the reintroduction of canine rabies from Mexico and to eliminate gray fox rabies.

1. Velasco-Villa A, Messenger SL, Orciari LA, et al. New rabies virus variant in a Mexican immigrant. Emerg Infect Dis 2008;14:1906–8.
2. Blanton JD, Robertson K, Palmer D, Rupprecht CE. Rabies surveillance in the United States during 2008. J Am Vet Med Assoc 2009; 235:676–89.
3. CDC. Rabies in a dog imported from Iraq—New Jersey, June 2008. MMWR 2008;57:1076–8.

Rocky Mountain Spotted Fever

The case definition for Rocky Mountain Spotted Fever (RMSF) was modified beginning in 2008 (*1*) to include more detailed classification criteria for serologic assays, including enzyme-linked immunosorbent assays and use of IgM antibody tests. During 2008, RMSF cases increased 15% over those reported in 2007. Cases reported in 2008 were distributed across the United States, reflecting the endemic status of RMSF and the widespread ranges of the primary tick vectors (primarily *Dermacentor variabilis* and *Dermacentor andersoni*) responsible for transmission. RMSF cases associated with transmission by *Rhipicephalus sanguineus*, first reported in 2004 (*2*), continued to be reported from Arizona during 2008.

The reporting years 2005–2008 reflect a trend toward stabilized numbers of reported RMSF cases. However, RMSF case reports have increased more than 300% during the past decade. This increase might be the result of several factors, including ecological changes influencing disease transmission, changes in diagnostic approaches that alter detection rates, or changes in surveillance and reporting. Changes in the case definition in 2004 and a further revision of the case definition beginning in 2008 (*1*) also might have altered how cases were classified.

1. Council of State and Territorial Epidemiologists. Revision of the surveillance case definitions for Rocky Mountain spotted fever. Position statement 07-ID-05. Atlanta, GA: Council of State and Territorial Epidemiologists; 2007. Available at http://www.cste.org/position%20statements/searchbyyear2007final.asp.
2. L Demma, Traeger M, Nicholson W, et al. Rocky Mountain spotted fever from an unexpected tick vector in Arizona. New Engl J Med 2005;353:587–94.

Salmonellosis

During 2008, as in previous years, the age group with the highest incidence of salmonellosis was children aged <5 years. *Salmonella enterica* serotype Typhimurium and *S. enterica* serotype Enteritidis have been the most frequently isolated serotypes since 1996 (*1*). The epidemiology of *Salmonella* has been changing during the past decade. *Salmonella* serotype Typhimurium has decreased in incidence, whereas the incidence of serotypes Newport, Mississippi, and Javiana have increased. Specific control programs might have led to the reduction of serotype Enteritidis infections, which have been associated with the consumption of internally contaminated eggs. Rates of antimicrobial resistance among several serotypes have been increasing; a substantial proportion of serotypes Typhimurium and Newport isolates are resistant to multiple drugs (*2*). The epidemiology of *Salmonella* infections is based on serotype characterization; therefore, in 2005, the Council of State and Territorial Epidemiologists adopted a position statement for serotype-specific reporting of laboratory-confirmed salmonellosis cases (*3*). Increasing evidence indicates that infections with certain serotypes of *Salmonella* are more likely to be invasive and lead to poor outcomes than infections with other serotypes. Such findings have implications for better understanding the public health importance and pathogenicity of salmonellosis (*4*).

1. CDC. Salmonella Surveillance summary, 2006. Atlanta, Georgia: U.S. Department of Health and Human Services, CDC; 2008. Available at http://www.cdc.gov/nationalsurveillance/salmonella_surveillance.html.
2. CDC. National Antimicrobial Resistance Monitoring System for Enteric Bacteria (NARMS): 2006 human isolates final report. Atlanta, Georgia: U.S. Department of Health and Human Services, CDC; 2009.
3. Council of State and Territorial Epidemiologists. Position statement 05-ID-09. Serotype specific national reporting for salmonellosis. Atlanta, GA: Council of State and Territorial Epidemiologists; 2005. Available at http://www.cste.org/PS/2005pdf/final2005/05-ID-09final.pdf.
4. Jones TF, Ingram LA, Cieslak PR, et al. Salmonellosis outcomes differ substantially by serotype. J Infect Dis 2008;198:109–14.

Shiga Toxin-Producing *Escherichia coli* (STEC)

Escherichia coli O157:H7 has been nationally notifiable since 1994 (*1*). National surveillance for all Shiga toxin-producing *E. coli* (STEC), under the name enterohemorrhagic *E. coli* (EHEC), began in 2001. In 2006, the nationally notifiable diseases case definition designation was changed from EHEC to STEC, and serotype-specific reporting was implemented (*2*). Diagnosis solely on the basis of detection of Shiga toxin does not protect public health sufficiently; characterizing STEC isolates by serogroup and, for *E. coli* O157, also by pulsed-field gel electrophoresis pattern is important to detect, investigate, and control outbreaks. Stool specimens from patients with community-acquired diarrhea should be submitted to clinical laboratories for routine testing, should be cultured for O157 STEC, and tested with an assay that detects Shiga toxins (*3*). This simultaneous approach has several advantages. First, it enables rapid detection of Shiga toxin-related illness, including that caused by non-O157 STEC, which are not readily identified in culture. Second, it permits rapid identification of O157 STEC, the serogroup most strongly associated with the development of hemolytic uremic syndrome (HUS); quickly identifying O157 STEC infections might facilitate measures to prevent HUS and speed the identification of outbreaks. Third, culturing enables isolation of STEC, which can then be characterized by serogroup and pulsed-field gel electrophoresis pattern to facilitate outbreak detection and investigation. All STEC isolates and enrichment broths from Shiga toxin-positive specimens that do not yield STEC O157 should be forwarded to state or local public health laboratories for further testing.

Healthy cattle, which harbor the organism as part of the bowel flora, are the main animal reservoir of STEC. Most reported outbreaks are caused by contaminated food or water.

During 2004, a substantial decline in reported O157:H7 STEC cases led to an incidence measured in the Foodborne Diseases Active Surveillance System (FoodNet) that met the Healthy People 2010 goal of <1.0 cases/100,000 population; since then, the incidence has increased (*4*).

1. Mead PS, Griffin PM. *Escherichia coli* O157:H7. Lancet 1998;352: 1207–12.
2. Council of State and Territorial Epidemiologists. Revision of the Enterohemorrhagic *Escherichia coli* (EHEC) condition name to Shiga toxin-producing *Escherichia coli* (STEC) and adoption of serotype specific national reporting for STEC. Position statement 05-ID-07. Atlanta, GA: Council of State and Territorial Epidemiologists; 2005. Available at http://www.cste.org/position%20statements/searchbyyear2005.asp.
3. CDC. Recommendations for diagnosis of shiga toxin-producing *Escherichia coli* infections by clinical laboratories, 2009. MMWR 2009;58(RR12):1–14.
4. CDC. Preliminary FoodNet data on the incidence of infection with pathogens transmitted commonly through food, 10 sites—United States, 2004. MMWR 2005; 54:352–6.

Shigellosis

During 1978–2003, shigellosis cases reported to CDC exceeded 17,000 in nearly every year. The approximately 14,000 cases of shigellosis reported to CDC in 2004 represented an all-time low. This number increased to approximately 16,000 in 2005, decreased slightly in 2006, increased to approximately 20,000 in 2007, and to approximately 22,000 in 2008. *Shigella sonnei* infections continue to account for >75% of shigellosis in the United States (*1*). Most cases occur among young children, and large day care-associated outbreaks are common and difficult to control (*2*). Some cases of shigellosis are acquired during international travel (*3,4*). In addition to spreading from one person to another, *Shigellae* can be transmitted through contaminated foods, sexual contact, and water used for drinking or recreational purposes (*1*). Resistance to ampicillin and trimethoprim-sulfamethoxazole among *S. sonnei* strains in the United States remains common (*5*).

1. Gupta A, Polyak CS, Bishop RD, Sobel J, Mintz ED. Laboratory confirmed shigellosis in the United States, 1989–2002: epidemiologic trends and patterns. Clin Infect Dis 2004;38:1372–7.
2. Arvelo W, Hinkle J, Nguyen TA, et al. Transmission risk factors and treatment of pediatric shigellosis during a large daycare center-associated outbreak of multidrug resistant *Shigella sonnei*. Pediatr Infect Dis J 2009;11:976–80
3. Ram PK, Crump JA, Gupta SK, Miller MA, Mintz, ED. Review article: part II. Analysis of data gaps pertaining to *Shigella* infections in low and medium human development index countries, 1984–2005. Epidemiol Infect 2008;136:577–603.
4. Gupta SK, Strockbine N, Omondi M, Hise K, Fair MA, Mintz ED. Short report: emergence of Shiga toxin 1 genes within *Shigella dysenteriae* Type 4 isolates from travelers returning from the island of Hispanola. Am J Trop Med Hyg 2007;76:1163–5.
5. CDC. National Antimicrobial Resistance Monitoring System for enteric bacteria (NARMS): Human isolates final report, 2006. Atlanta, GA: US Department of Health and Human Services, CDC; 2009. Available at http://www.cdc.gov/narms.

Syphilis, Primary and Secondary

The rate of primary and secondary (P&S) syphilis in the United States declined 90% during 1990–2000. However, the rate of P&S syphilis has increased each year since 2001, mostly in men, but also in women for the past 4 years. In 2008, a total of 13,500 cases of P&S syphilis were reported to CDC. (*1*) This is the highest number of reported cases since 1995 and corresponds to a rate of 4.5 cases per 100,000 population, an 18% increase from 2007. Since 2001, the rate of P&S syphilis has increased 114%. On the basis of information from 44 states and Washington, D.C. in 2008, 63% of reported P&S syphilis cases in the United States occurred among men who have sex with men (MSM). Although the majority of U.S. syphilis cases have occurred among MSM, syphilis among heterosexuals is an emerging problem as reflected in a 88% increase in women since 2004 (*1*).

1. CDC. Sexually Transmitted Disease Surveillance, 2008. Atlanta, GA: U.S. Department of Health and Human Services; November 2009.

Trichinellosis

In November 2008, an outbreak of trichinellosis occurred in Humboldt County, California, among several families who participated in a cultural ceremony. At least 34 persons attended the event, at which they shared a meal of bear meat that was hunted by one of the family members. Case-patients recalled eating both raw and undercooked bear meat; 30 confirmed cases were reported to CDC.

This is the eighth outbreak and the largest attributed to bear meat reported to CDC in the past 10 years (*1,2*); it highlights the continued need for public health prevention messages aimed at consumers of wild game meat in general and for targeted prevention messages for certain cultural groups whose customs put them at risk for *Trichinella* infection in particular.

Proper cooking of meat dishes, especially dishes prepared with some types of game meats, will prevent trichinellosis. Meat products, including sausages or other prepared dishes, should be cooked to internal temperatures of at least 170° F or until juices run clear. Some species of *Trichinella* are resistant to freezing, so freezing might not be an effective prevention measure (*3*).

1. Kennedy ED, Hall RL, Montgomery SP, Pyburn DG, Jones JL. Trichinellosis surveillance—United States, 2002–2007. In: Surveillance Summaries, December 4, 2009. MMWR 2009;58 (No. SS-9).
2. Roy SL, Lopez AS, Schantz PM. Trichinellosis surveillance—United States, 1997–2001. In: Surveillance Summaries, July 25, 2003. MMWR 2003;52(No. SS-6).
3. Hill DE, Gamble HR, Zarlenga DS, Coss C, Finnigan J. *Trichinella native* in a black bear from Plymouth, New Hampshire. Vet Parasitol 2005;132:143–6.

Typhoid Fever

Recommendations indicate that travelers to countries in which typhoid fever is endemic should be vaccinated with either of two effective vaccines available in the United States. Despite these recommendations, approximately 75% of all cases of typhoid fever reported in the United States from 1999 through 2006 occurred among persons who reported international travel during the preceding month and who had not been vaccinated (*1*). Persons visiting friends and relatives in South Asia appear to be at particular risk, even during short visits (*1*,*2*). Certain recent illnesses have been caused by ciprofloxacin-resistant isolates (*1*). *Salmonella* serotype Typhi strains with decreased susceptibility to ciprofloxacin are isolated with increasing frequency, and infected persons might require treatment with alternative antimicrobial agents (*3*). Although the number of *S.* Typhi infections in the United States has been decreasing slowly, the number of infections attributed to *Salmonella* serotype Paratyphi A, which causes an illness indistinguishable from that caused by *S.* Typhi, has been increasing. In a cross-sectional laboratory-based surveillance study conducted by CDC, 80% of patients with paratyphoid fever acquired their infections in South Asia, and 75% were infected with nalidixic acid-resistant strains, indicating decreased susceptibility to ciprofloxacin. A vaccine for paratyphoid fever is needed (*4*).

1. Lynch MF, Blanton EM, Bulens S, et al. Typhoid fever in the United States, 1999–2006. JAMA 2009;302:898–9
2. Steinberg EB, Bishop RB, Dempsey AF, et al. Typhoid fever in travelers: who should be targeted for prevention? Clin Infect Dis 2004;39:186–91.
3. Crump JA, Ram PK, Gupta SK, Miller MA, Mintz ED. Review article: part I. analysis of data gaps pertaining to *Salmonella enterica* serotype Typhi infections in low and medium human development index countries, 1984–2005. Epidemiol Infect 2008;136:436–48.
4. Gupta SK, Medalla F, Omondi MW, et al. Laboratory-based surveillance of paratyphoid fever in the United States: travel and antimicrobial resistance. Clin Infect Dis 2007;46:1656–63.

Varicella (Chickenpox) Deaths

Varicella-related deaths have declined dramatically since the prevaccine era; during 2003–2005 the national annual average of varicella-related deaths was 16 (*1*) compared with 100–150 deaths during 1990–1994 (*2*,*3*). In 1999, varicella-related deaths became reportable to CDC (*4*) and an average of five deaths (range: 0–9 deaths) has been reported annually to CDC since then (*1*). The two varicella-related deaths reported in 2008 highlight important aspects of continued progress towards varicella disease control and prevention.

Both varicella-related deaths occurred in adult females aged 41 and 72 years; both were born outside of the United States, had underlying chronic conditions that were not contraindications for vaccination, and had no history of varicella disease or vaccination. Assessing evidence of immunity to varicella is important in determining who should be vaccinated. One of the criteria for evidence of immunity is birth in the United States before 1980 (*5*). Both of the reported deaths that occurred in adults in 2008 were in persons born outside of the United States. Both women had been assessed as susceptible to varicella during previous health-care visits. Vaccination was recommended to both women at the time of assessment but one refused it and vaccine was not available for the second woman at a follow-up visit. These deaths highlight the importance of assessing immune status among foreign-born persons and emphasize the need for vaccination if they are determined to be susceptible.

1. CDC. Summary of Notifiable Diseases—United States, 2007. MMWR 2007;56(No. 53).
2. Nguyen HQ, Jumaan AO, Seward JF. Decline in mortality due to varicella after implementation of varicella vaccination in the United States. N Engl J Med 2005;352:450–8.
3. Preblud SR. Age-specific risk of varicella complications. Pediatrics 1981;68:14–7.
4. Council of State and Territorial Epidemiologists. CSTE position statement 1998-ID-10: inclusion of varicella-related deaths in the National Public Health Surveillance System (NPHSS). Available at http://www.cste.org/ps/1998/1998-id-10.htm.
5. CDC. Prevention of varicella: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2007;56 (No. RR-4).

Vibriosis

Vibriosis became a nationally notifiable disease in January 2007 (*1*). Cholera, which is caused by infection with toxigenic *Vibrio cholerae* O1 and O139, has been nationally notifiable for several years. Infections attributable to other *Vibrio* species (vibriosis), especially *V. parahaemolyticus* and *V. vulnificus*, are a substantial public health burden. Infections are either foodborne or associated with wounds exposed to waters containing *Vibrio* species. During 2008, the majority of cases occurred in persons aged 40–64 years. In addition to reporting through the National Notifiable Diseases Surveillance System, CDC requests that states collect information on the standard surveillance form for cholera and other *Vibrio* illness surveillance (available at http://www.cdc.gov/nationalsurveillance/cholera_vibrio_surveillance.html).

1. Council of State and Territorial Epidemiologists. National reporting for non-cholera *Vibrio* infections (vibriosis). Position statement 06-ID-05. Atlanta, GA: Council of State and Territorial Epidemiologists; 2006. Available at http://www.cste.org/position%20statements/searchbyyear2006.

PART 1

Summaries of Notifiable Diseases in the United States, 2008

Abbreviations and Symbols Used in Tables

U	Data not available.
N	Not reportable (i.e., report of disease is not required in that jurisdiction).
—	No reported cases.
Notes:	Rates <0.01 after rounding are listed as 0.
	Data in the *MMWR Summary of Notifiable Diseases — United States, 2008* might not match data in other CDC surveillance reports because of differences in the timing of reports, the source of the data, and the use of different case definitions.

TABLE 1. Reported cases of notifiable diseases,* by month — United States, 2008

Disease	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
AIDS†	1,557	1,675	4,757	1,999	1,723	6,378	1,782	1,728	6,332	1,891	1,800	7,580	**39,202**
Botulism, total	9	6	9	14	13	10	13	15	9	17	18	12	**145**
foodborne	—	—	—	2	4	1	—	2	—	4	3	1	**17**
infant	9	6	8	10	8	7	12	12	8	11	10	8	**109**
other (wound and unspecified)	—	—	1	2	1	2	1	1	1	2	5	3	**19**
Brucellosis	4	5	2	7	10	7	6	9	8	6	8	8	**80**
Chancroid§	1	6	4	3	2	1	3	1	—	1	1	2	**25**
Chlamydia trachomatis infections§	76,143	89,998	113,581	97,620	114,978	92,058	88,902	118,288	94,455	95,523	114,776	114,201	**1,210,523**
Cholera	—	—	—	—	—	—	1	2	1	—	—	1	**5**
Coccidioidomycosis	702	443	552	474	665	516	464	533	432	486	997	1,259	**7,523**
Cryptosporidiosis	269	260	394	385	418	411	657	2,015	1,532	1,166	778	828	**9,113**
Cyclosporiasis	10	9	6	2	8	23	27	22	6	6	6	14	**139**
Domestic arboviral diseases¶													
California serogroup virus													
neuroinvasive	—	1	—	1	1	6	11	18	14	3	—	—	**55**
nonneuroinvasive	—	—	—	—	1	1	2	2	1	—	—	—	**7**
Eastern equine encephalitis virus, neuroinvasive	—	—	—	—	—	1	—	1	1	1	—	—	**4**
Powassan virus, neuroinvasive	—	—	—	—	—	1	1	—	—	—	—	—	**2**
St. Louis encephalitis virus													
neuroinvasive	—	—	1	—	1	2	3	1	—	—	—	—	**8**
nonneuroinvasive	—	—	—	—	—	—	1	2	1	1	—	—	**5**
West Nile virus													
neuroinvasive	—	1	1	—	2	10	78	265	236	84	10	2	**689**
nonneuroinvasive	1	—	1	3	9	22	67	325	181	55	3	—	**667**
Ehrlichiosis/Anaplasmosis													
Ehrlichia chaffeensis	5	8	17	8	62	126	180	185	85	73	71	137	**957**
Ehrlichia ewingii	—	—	—	—	—	1	3	3	1	1	—	—	**9**
Anaplasma phagocytophilum	2	3	25	12	59	125	169	154	87	91	133	149	**1,009**
Undetermined	—	—	1	1	6	6	35	30	9	10	13	21	**132**
Giardiasis	959	1,148	1,451	1,173	1,518	1,276	1,557	2,405	2,067	1,809	1,821	1,724	**18,908**
Gonorrhea§	23,231	25,311	31,347	26,579	31,286	25,720	26,435	33,882	26,847	26,345	29,468	30,291	**336,742**
Haemophilus influenzae, invasive disease													
all ages, serotypes	260	267	324	222	284	232	191	198	132	167	240	369	**2,886**
age<5 yrs													
serotype b	2	6	3	1	2	—	1	2	1	2	3	7	**30**
nonserotype b	29	22	27	18	31	15	15	15	11	13	18	30	**244**
unknown serotype	12	22	18	13	19	14	15	5	7	6	13	19	**163**
Hansen disease (Leprosy)	7	10	9	8	4	1	7	8	8	6	5	7	**80**
Hantavirus pulmonary syndrome	—	2	1	1	4	2	—	2	3	—	1	2	**18**
Hemolytic uremic syndrome, post-diarrheal	4	8	14	13	23	38	29	38	29	27	28	79	**330**
Hepatitis, viral, acute													
A	186	218	237	222	295	167	233	243	215	183	162	224	**2,585**
B	245	308	345	296	397	249	321	378	312	299	337	546	**4,033**
C	45	69	58	57	102	69	88	85	49	66	83	106	**877**
Influenza-associated pediatric mortality††	—	23	35	8	12	8	1	1	—	1	1	—	**90**
Legionellosis	142	141	185	117	205	257	439	455	380	309	235	316	**3,181**
Listeriosis	61	34	48	48	47	53	58	93	70	82	70	95	**759**
Lyme disease, total	498	646	832	913	2,099	4,788	7,426	5,864	3,079	2,783	2,528	3,742	**35,198**
confirmed	420	524	672	701	1,717	4,169	6,463	4,958	2,481	2,217	2,004	2,595	**28,921**
probable	78	122	160	212	382	619	963	906	598	566	524	1,147	**6,277**
Malaria	68	72	35	71	110	111	137	174	145	107	94	131	**1,255**
Measles, total	1	5	24	39	21	36	5	2	1	—	1	5	**140**
indigenous	—	3	21	34	14	34	5	1	1	—	—	2	**115**
imported	1	2	3	5	7	2	—	1	—	—	1	3	**25**
Meningococcal disease													
all serogroups	70	137	197	100	114	96	81	68	54	65	81	109	**1,172**
serogroup A,C,Y, & W-135	16	40	62	28	31	26	26	21	13	17	19	31	**330**
serogroup B	14	25	30	10	15	14	17	11	8	9	16	19	**188**
other serogroup	4	3	9	1	6	6	1	3	—	1	3	1	**38**
serogroup unknown	36	69	96	61	62	50	37	33	33	38	43	58	**616**
Mumps	38	76	63	37	33	22	28	29	23	25	25	55	**454**
Novel influenza A virus infections	—	—	—	—	—	—	—	—	—	—	1	1	**2**
Pertussis	557	723	620	576	659	692	877	1,318	1,122	1,046	1,683	3,405	**13,278**
Plague	1	—	—	—	—	—	—	—	—	1	—	1	**3**
Psittacosis	1	1	1	—	2	—	—	—	1	—	1	1	**8**

See footnotes on next page.

TABLE 1. (*Continued*) Reported cases of notifiable diseases,* by month — United States, 2008

Disease	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Q Fever, total	4	5	8	7	15	15	8	12	12	8	8	18	**120**
acute	4	5	7	7	12	14	7	11	11	5	7	16	**106**
chronic	—	—	1	—	3	1	1	1	1	3	1	2	**14**
Rabies													
animal	320	188	345	322	435	364	368	567	407	328	309	243	**4,196**
human	—	—	1	—	—	—	—	—	—	—	1	—	**2**
Rocky Mountain spotted fever, total	16	16	23	48	140	308	456	585	257	194	201	319	**2,563**
confirmed	3	2	4	6	16	31	28	50	21	11	7	11	**190**
probable	13	14	19	42	124	277	427	532	235	183	193	308	**2,367**
Rubella	—	—	2	3	2	1	1	—	3	1	3	—	**16**
Salmonellosis	2,467	1,955	2,516	2,303	3,758	4,825	5,379	6,908	5,443	4,600	4,655	6,231	**51,040**
Shiga toxin-producing *E. coli* (STEC)	188	147	256	233	359	520	668	843	581	551	408	555	**5,309**
Shigellosis	1,034	985	1,311	1,311	2,093	1,837	1,989	2,394	1,839	1,960	2,634	3,238	**22,625**
Streptococcal disease, invasive, group A	422	569	817	538	603	453	313	372	253	244	393	697	**5,674**
Streptococcal, toxic-shock syndrome	10	11	23	17	20	11	7	8	4	5	11	30	**157**
Streptococcus pneumoniae, invasive disease													
drug resistant, all ages	347	330	465	319	308	186	119	129	125	177	347	596	**3,448**
age <5 yrs	34	43	68	54	53	33	24	27	28	46	57	65	**532**
non-drug resistant, age <5 yrs	164	177	228	157	203	115	83	94	112	135	218	312	**1,998**
Syphilis, total, all stages††	2,813	3,181	4,296	3,544	4,378	3,411	3,417	4,744	3,638	3,780	4,343	4,732	**46,277**
congenital (age <1 yr)§	36	31	34	32	38	29	42	51	42	42	18	36	**431**
primary and secondary¶	858	931	1,201	973	1,165	970	1,061	1,330	1,092	1,141	1,305	1,473	**13,500**
Tetanus	—	—	1	1	1	2	1	4	2	5	—	2	**19**
Toxic-shock syndrome	2	5	10	1	5	5	6	7	3	7	8	12	**71**
Trichinellosis	—	1	1	—	—	1	2	2	—	—	1	31	**39**
Tuberculosis§§	605	790	996	1,068	1,134	1,024	1,175	1,090	1,015	1,173	961	1,873	**12,904**
Tularemia	1	—	1	4	14	25	22	24	9	4	5	14	**123**
Typhoid fever	22	35	41	39	50	24	31	46	61	39	19	42	**449**
Vancomycin-intermediate *Staphylococcus aureus* (VISA)	3	7	6	2	3	3	3	2	12	5	7	10	**63**
Varicella (chickenpox) morbidity¶¶	2,042	2,867	3,896	3,546	4,345	2,068	919	884	1,732	2,059	2,560	3,468	**30,386**
Vibriosis	23	10	19	12	25	47	74	119	96	49	58	56	**588**

* No cases of anthrax; diphtheria; eastern equine encephalitis virus, non-neuroinvasive; poliomyelitis, paralytic; poliovirus infection, nonparalytic; Powassan virus, non-neuroinvasive; rubella; congenital syndrome; severe acute respiratory syndrome-associated coronavirus disease (SARS-CoV); smallpox; vancomycin-resistant *Staphylococcus aureus* (VRSA) infection; western equine encephalitis virus, neuroinvasive and non-neuroinvasive; and yellow fever were reported in 2008. Data on chronic hepatitis B and hepatitis C virus infection (past or present) are not included because they are undergoing data quality review. Data on human immunodeficiency virus (HIV) infections are not included because HIV infection reporting has been implemented on different dates and using different methods than for AIDS case reporting.

† Total number of AIDS cases reported to the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) through December 31, 2008.

§ Totals reported to the Division of STD Prevention, NCHHSTP, as of May 8, 2009.

¶ Totals reported to the Division of Vector-Borne Diseases, National Center for Emerging and Zoonotic Infectious Diseases, (ArboNET Surveillance), as of May 1, 2009.

** Totals reported to the Influenza Division, National Center for Immunization and Respiratory Diseases (NCIRD), as of December 31, 2008.

†† Includes the following categories: primary, secondary, latent (including early latent, late latent, and latent syphilis of unknown duration), neurosyphilis, late (including late syphilis with clinical manifestations other than neurosyphilis), and congenital syphilis.

§§ Totals reported to the Division of TB Elimination, NCHHSTP, as of May 15, 2009.

¶¶ Totals reported to the Division of Viral Diseases, NCIRD, as of June 30, 2009.

TABLE 2. Reported cases of notifiable diseases,* by geographic division and area — United States, 2008

Area	Total resident population (in thousands)	AIDS†	Botulism				Brucellosis
			Total	Foodborne	Infant	Other§	
United States	301,621	39,202¶	145	17	109	19	80
New England	14,264	1,188	4	—	4	—	—
Connecticut	3,502	408	2	—	2	—	—
Maine	1,317	30	—	—	—	—	—
Massachusetts	6,450	622	1	—	1	—	—
New Hampshire	1,316	30	—	—	—	—	—
Rhode Island	1,058	88	1	—	1	—	—
Vermont	621	10	—	—	—	—	—
Mid. Atlantic	40,417	7,042	23	—	23	—	7
New Jersey	8,686	1,627	3	—	3	—	2
New York (Upstate)	11,023	1,522	1	—	1	—	1
New York City	8,275	2,649	1	—	1	—	2
Pennsylvania	12,433	1,244	18	—	18	—	2
E.N. Central	46,339	3,310	6	4	2	—	6
Illinois	12,853	1,360	1	—	1	—	1
Indiana	6,345	424	1	1	—	—	1
Michigan	10,072	651	—	—	—	—	1
Ohio	11,467	701	4	3	1	—	—
Wisconsin	5,602	174	—	—	—	—	3
W.N. Central	20,051	913	5	1	4	—	4
Iowa	2,988	71	1	—	1	—	2
Kansas	2,776	122	—	—	—	—	—
Minnesota	5,198	207	1	—	1	—	1
Missouri	5,878	417	2	—	2	—	—
Nebraska	1,775	73	1	1	—	—	1
North Dakota	640	12	—	—	—	—	—
South Dakota	796	11	—	—	—	—	—
S. Atlantic	57,860	13,411	13	1	12	—	14
Delaware	865	166	—	—	—	—	—
District of Columbia	588	767	—	—	—	—	1
Florida	18,251	5,064	1	—	1	—	10
Georgia	9,545	2,153	—	—	—	—	1
Maryland	5,618	2,389	5	—	5	—	—
North Carolina	9,061	1,384	1	—	1	—	1
South Carolina	4,408	723	1	—	1	—	1
Virginia	7,712	698	3	—	3	—	—
West Virginia	1,812	67	2	1	1	—	—
E.S. Central	17,945	1,640	—	—	—	—	1
Alabama	4,628	402	—	—	—	—	—
Kentucky	4,241	293	—	—	—	—	—
Mississippi	2,919	356	—	—	—	—	—
Tennessee	6,157	589	—	—	—	—	1
W.S. Central	34,649	4,001	8	—	8	—	10
Arkansas	2,835	100	—	—	—	—	—
Louisiana	4,293	903	—	—	—	—	1
Oklahoma	3,617	137	—	—	—	—	—
Texas	23,904	2,861	8	—	8	N	9
Mountain	21,361	1,486	19	1	17	1	9
Arizona	6,339	570	4	1	2	1	3
Colorado	4,862	343	3	—	3	—	2
Idaho	1,499	31	1	—	1	—	—
Montana	958	48	3	—	3	—	—
Nevada	2,565	307	—	—	—	N	1
New Mexico	1,970	109	2	—	2	—	1
Utah	2,645	65	5	—	5	—	1
Wyoming	523	13	1	—	1	—	1
Pacific	48,735	5,539	67	10	39	18	29
Alaska	684	27	7	7	—	—	—
California	36,553	4,818	55	3	36	16	23
Hawaii	1,283	97	—	—	—	—	4
Oregon	3,747	207	2	—	2	—	1
Washington	6,468	390	3	—	1	2	1
American Samoa	64	—	—	—	—	—	—
C.N.M.I.	59	1	—	—	—	—	—
Guam	174	7	U	U	U	U	U
Puerto Rico	3,942	704	—	—	—	—	—
U.S. Virgin Islands	110	12	—	—	—	—	—

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

* No cases of anthrax; diphtheria; eastern equine encephalitis virus disease, non-neuroinvasive; poliomyelitis, paralytic; poliovirus infection, nonparalytic; Powassan virus disease, non-neuroinvasive; rubella, congenital syndrome; severe acute respiratory syndrome-associated coronavirus disease (SARS-CoV); smallpox; vancomycin-resistant *Staphylococcus aureus* (VRSA) infection; western equine encephalitis virus disease, neuroinvasive and non-neuroinvasive; and yellow fever were reported in 2008. Data on chronic hepatitis B and hepatitis C virus infection (past or present) are not included because they are undergoing data quality review. Data on human immunodeficiency virus (HIV) infections are not included because HIV infection reporting has been implemented on different dates and using different methods than for AIDS case reporting.

† Total number of acquired immunodeficiency syndrome (AIDS) cases reported to the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP), through December 31, 2008.

§ Includes cases reported as wound and unspecified botulism.

¶ Includes 672 cases of AIDS in persons with unknown state or area of residence that were reported in 2008.

TABLE 2. (*Continued*) Reported cases of notifiable diseases,* by geographic division and area — United States, 2008

Area	Chancroid**	*Chlamydia***	Cholera	Coccidioidomycosis	Cryptosporidiosis	Cyclosporiasis
United States	25	1,210,523	5	7,523	9,113	139
New England	4	39,246	—	1	393	10
Connecticut	—	12,519	—	N	41	4
Maine	—	2,608	—	N	46	N
Massachusetts	4	17,503	—	N	172	5
New Hampshire	—	2,109	—	1	60	1
Rhode Island	—	3,317	—	—	10	—
Vermont	—	1,190	—	N	64	N
Mid. Atlantic	2	152,997	1	—	742	33
New Jersey	—	22,405	1	N	40	9
New York (Upstate)	2	31,881	—	N	269	6
New York City	—	56,478	—	N	107	18
Pennsylvania	—	42,233	—	N	326	N
E.N. Central	1	194,359	1	44	2,163	9
Illinois	—	59,169	1	N	205	4
Indiana	—	22,154	—	N	203	2
Michigan	—	44,923	—	31	280	1
Ohio	1	47,117	—	13	689	1
Wisconsin	—	20,996	—	N	786	1
W.N. Central	—	68,198	—	3	1,002	4
Iowa	—	9,372	—	N	284	—
Kansas	—	9,208	—	N	84	—
Minnesota	—	14,351	—	—	236	3
Missouri	—	24,817	—	3	181	—
Nebraska	—	5,573	—	N	113	N
North Dakota	—	1,921	—	N	16	N
South Dakota	—	2,956	—	N	88	1
S. Atlantic	5	247,480	—	5	1,071	70
Delaware	—	3,868	—	2	12	—
District of Columbia	—	6,924	—	—	15	3
Florida	—	71,017	—	N	486	58
Georgia	—	42,629	—	N	263	2
Maryland	—	24,669	—	3	54	3
North Carolina	4	37,516	—	N	78	1
South Carolina	1	26,323	—	N	57	1
Virginia	—	31,218	—	N	81	2
West Virginia	—	3,316	—	N	25	—
E.S. Central	—	86,214	—	—	174	3
Alabama	—	24,760	—	N	74	N
Kentucky	—	12,163	—	N	36	N
Mississippi	—	21,253	—	N	17	N
Tennessee	—	28,038	—	N	47	3
W.S. Central	8	152,468	2	3	2,545	6
Arkansas	—	14,136	—	N	95	—
Louisiana	—	22,659	1	3	67	—
Oklahoma	—	14,803	—	N	143	—
Texas	8	100,870	1	N	2,240	6
Mountain	2	77,774	—	4,870	580	3
Arizona	—	24,769	—	4,768	89	—
Colorado	2	19,180	—	N	112	1
Idaho	—	4,194	—	N	72	N
Montana	—	3,101	—	N	44	N
Nevada	—	9,670	—	52	17	N
New Mexico	—	9,262	—	35	175	2
Utah	—	6,021	—	12	48	—
Wyoming	—	1,577	—	3	23	—
Pacific	3	191,787	1	2,597	443	1
Alaska	—	4,861	—	N	3	—
California	2	148,798	—	2,597	275	—
Hawaii	—	5,982	—	N	2	—
Oregon	—	10,744	1	N	64	—
Washington	1	21,402	—	N	99	1
American Samoa	—	—	—	N	N	N
C.N.M.I.	—	—	—	—	—	—
Guam	—	687	U	U	U	U
Puerto Rico	—	6,874	—	N	N	N
U.S. Virgin Islands	—	587	—	—	—	—

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.
** Totals reported to the Division of STD Prevention, NCHHSTP, as of May 8, 2009.

TABLE 2. (*Continued*) Reported cases of notifiable diseases,* by geographic division and area — United States, 2008

Area	Domestic arboviral diseases††							
	California serogroup virus		Eastern equine encephalitis virus	Powassan virus	St. Louis encephalitis virus		West Nile virus	
	Neuro-invasive	Nonneuro-invasive	Neuro-invasive	Neuro-invasive	Neuro-invasive	Nonneuro-invasive	Neuro-invasive	Nonneuro-invasive
United States	55	7	4	2	8	5	689	667
New England	—	—	1	—	—	—	7	3
Connecticut	—	—	—	—	—	—	5	3
Maine	—	—	—	—	—	—	—	—
Massachusetts	—	—	1	—	—	—	1	—
New Hampshire	—	—	—	—	—	—	—	—
Rhode Island	—	—	—	—	—	—	1	—
Vermont	—	—	—	—	—	—	—	—
Mid. Atlantic	5	1	—	1	—	1	50	20
New Jersey	—	—	—	—	—	—	6	4
New York (Upstate)	5	1	—	1	—	—	24	7
New York City	—	—	—	—	—	—	8	7
Pennsylvania	—	—	—	—	—	1	12	2
E.N. Central	13	2	—	—	—	—	44	20
Illinois	—	—	—	—	—	—	12	8
Indiana	—	—	—	—	—	—	3	1
Michigan	—	—	—	—	—	—	11	6
Ohio	9	—	—	—	—	—	14	1
Wisconsin	4	2	—	—	—	—	4	4
W.N. Central	1	—	—	1	—	1	51	134
Iowa	—	—	—	—	—	—	3	3
Kansas	—	—	—	—	—	—	14	17
Minnesota	1	—	—	1	—	—	2	8
Missouri	—	—	—	—	—	1	12	3
Nebraska	—	—	—	—	—	—	7	40
North Dakota	—	—	—	—	—	—	2	35
South Dakota	—	—	—	—	—	—	11	28
S. Atlantic	27	1	2	—	3	—	20	20
Delaware	—	—	—	—	—	—	—	1
District of Columbia	—	—	—	—	—	—	4	4
Florida	—	1	1	—	—	—	3	—
Georgia	2	—	—	—	—	—	4	4
Maryland	—	—	—	—	—	—	6	8
North Carolina	9	—	1	—	3	—	2	1
South Carolina	—	—	—	—	—	—	—	1
Virginia	2	—	—	—	—	—	—	1
West Virginia	14	—	—	—	—	—	1	—
E.S. Central	8	3	1	—	—	—	48	57
Alabama	—	—	1	—	—	—	11	7
Kentucky	1	—	—	—	—	—	3	—
Mississippi	1	3	—	—	—	—	22	43
Tennessee	6	—	—	—	—	—	12	7
W.S. Central	1	—	—	—	5	2	69	62
Arkansas	—	—	—	—	4	—	7	2
Louisiana	1	—	—	—	1	2	18	31
Oklahoma	—	—	—	—	—	—	4	5
Texas	—	—	—	—	—	—	40	24
Mountain	—	—	—	—	—	—	103	184
Arizona	—	—	—	—	—	—	62	52
Colorado	—	—	—	—	—	—	17	54
Idaho	—	—	—	—	—	—	4	35
Montana	—	—	—	—	—	—	—	5
Nevada	—	—	—	—	—	—	9	7
New Mexico	—	—	—	—	—	—	5	3
Utah	—	—	—	—	—	—	6	20
Wyoming	—	—	—	—	—	—	—	8
Pacific	—	—	—	—	—	1	297	167
Alaska	—	—	—	—	—	—	—	—
California	—	—	—	—	—	—	292	153
Hawaii	—	—	—	—	—	—	—	—
Oregon	—	—	—	—	—	1	3	13
Washington	—	—	—	—	—	—	2	1
American Samoa	—	—	—	—	—	—	—	—
C.N.M.I.	—	—	—	—	—	—	—	—
Guam	—	—	—	—	—	—	—	—
Puerto Rico	—	—	—	—	—	—	—	—
U.S. Virgin Islands	—	—	—	—	—	—	—	—

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

†† Totals reported to the Division of Vector-Borne Diseases, National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) (ArboNET Surveillance), as of May 1, 2009.

TABLE 2. (*Continued*) Reported cases of notifiable diseases,* by geographic division and area — United States, 2008

Area	Ehrlichiosis/Anaplasmosis				Giardiasis	Gonorrhea**
	Ehrlichia chaffeensis	*Ehrlichia ewingii*	*Anaplasma phagocytophilum*	Undetermined		
United States	957	9	1,009	132	18,908	336,742
New England	42	—	197	1	1,660	5,470
Connecticut	2	—	45	—	334	2,801
Maine	1	—	17	—	188	96
Massachusetts	21	—	85	—	678	2,129
New Hampshire	7	—	14	—	160	100
Rhode Island	11	—	36	1	90	307
Vermont	—	—	—	—	210	37
Mid. Atlantic	123	1	303	10	3,532	33,477
New Jersey	54	—	45	3	520	5,298
New York (Upstate)	61	—	239	3	1,282	6,615
New York City	5	1	17	—	851	10,493
Pennsylvania	3	—	2	4	879	11,071
E.N. Central	58	—	205	31	2,743	69,397
Illinois	28	—	3	3	705	20,674
Indiana	4	—	—	—	N	8,769
Michigan	3	—	—	—	611	17,064
Ohio	11	—	1	—	904	16,803
Wisconsin	12	—	201	28	523	6,087
W.N. Central	212	6	281	69	2,106	17,003
Iowa	N	N	N	N	326	1,700
Kansas	—	—	—	—	162	2,274
Minnesota	14	1	278	43	769	3,037
Missouri	195	5	1	26	468	8,014
Nebraska	3	N	1	N	209	1,460
North Dakota	N	N	N	N	36	143
South Dakota	—	—	1	—	136	375
S. Atlantic	207	1	15	5	3,119	86,462
Delaware	19	1	4	—	42	1,045
District of Columbia	N	N	N	N	72	2,656
Florida	10	—	2	—	1,391	23,326
Georgia	19	—	1	—	691	16,272
Maryland	61	—	4	1	284	6,666
North Carolina	34	—	2	4	N	15,972
South Carolina	1	—	—	—	136	9,442
Virginia	63	—	2	—	432	10,337
West Virginia	—	—	—	—	71	746
E.S. Central	86	—	—	14	506	30,562
Alabama	9	—	N	N	281	9,740
Kentucky	13	—	—	—	N	4,548
Mississippi	—	—	—	—	N	7,494
Tennessee	64	—	—	14	225	8,780
W.S. Central	229	1	8	—	473	51,353
Arkansas	87	—	N	N	143	4,514
Louisiana	—	1	—	—	150	9,455
Oklahoma	114	—	7	—	180	5,185
Texas	28	—	1	—	N	32,199
Mountain	—	—	—	2	1,661	11,691
Arizona	—	—	—	2	142	3,449
Colorado	N	N	N	N	564	3,757
Idaho	N	N	N	N	211	187
Montana	N	N	N	N	93	122
Nevada	N	N	N	N	121	2,172
New Mexico	N	N	N	N	107	1,403
Utah	—	—	—	—	374	477
Wyoming	—	—	—	—	49	124
Pacific	—	—	—	—	3,108	31,327
Alaska	N	N	N	N	108	578
California	—	—	N	N	2,017	25,787
Hawaii	N	N	N	N	42	610
Oregon	—	—	—	—	455	1,225
Washington	N	N	N	N	486	3,127
American Samoa	N	N	N	N	—	—
C.N.M.I.	—	—	—	—	—	—
Guam	U	U	U	U	U	109
Puerto Rico	N	N	N	N	227	273
U.S. Virgin Islands	N	N	N	N	—	120

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

TABLE 2. (*Continued*) Reported cases of notifiable diseases,* by geographic division and area — United States, 2008

Area	*Haemophilus influenzae*, invasive disease				Hansen disease (leprosy)	Hantavirus pulmonary syndrome	Hemolytic uremic syndrome, postdiarrheal
	All ages, serotypes	Age <5 yrs					
		Serotype b	Nonserotype b	Unknown serotype			
United States	2,886	30	244	163	80	18	330
New England	196	1	10	2	8	—	15
Connecticut	54	—	4	—	3	N	5
Maine	21	—	2	—	N	—	1
Massachusetts	83	1	3	1	5	—	6
New Hampshire	12	—	—	1	—	—	1
Rhode Island	17	—	1	—	—	—	—
Vermont	9	—	—	—	N	—	2
Mid. Atlantic	554	2	16	38	9	—	15
New Jersey	98	—	—	10	1	—	3
New York (Upstate)	171	2	15	2	N	—	7
New York City	90	—	—	9	8	—	5
Pennsylvania	195	—	1	17	—	—	N
E.N. Central	483	8	35	30	3	—	28
Illinois	157	—	—	16	1	—	3
Indiana	93	2	6	5	—	—	1
Michigan	31	2	6	—	—	—	6
Ohio	135	2	11	9	2	—	7
Wisconsin	67	2	12	—	—	—	11
W.N. Central	211	5	5	21	4	2	48
Iowa	2	—	—	—	1	1	16
Kansas	20	—	—	2	—	—	3
Minnesota	71	5	5	2	1	—	11
Missouri	72	—	—	15	1	—	13
Nebraska	30	—	—	2	—	—	1
North Dakota	16	—	—	—	N	1	1
South Dakota	—	—	—	—	1	—	3
S. Atlantic	714	4	77	22	11	—	36
Delaware	8	—	—	2	—	—	—
District of Columbia	8	—	—	—	—	—	—
Florida	191	1	22	2	10	—	5
Georgia	149	—	14	10	N	—	19
Maryland	97	1	12	—	—	—	1
North Carolina	81	1	11	2	—	—	7
South Carolina	62	—	8	3	1	—	2
Virginia	92	1	8	3	—	—	2
West Virginia	26	—	2	—	N	—	—
E.S. Central	151	2	7	11	—	—	25
Alabama	25	1	2	—	—	N	5
Kentucky	10	—	—	1	—	—	N
Mississippi	14	1	1	—	—	—	—
Tennessee	102	—	4	10	—	—	20
W.S. Central	132	2	11	4	3	2	69
Arkansas	15	—	3	1	—	—	5
Louisiana	13	—	1	3	2	2	1
Oklahoma	93	—	7	—	1	—	51
Texas	11	2	—	—	—	—	12
Mountain	297	5	49	16	4	12	32
Arizona	107	3	23	3	—	1	6
Colorado	60	—	6	2	1	6	6
Idaho	12	—	3	3	—	—	4
Montana	5	—	1	2	—	2	—
Nevada	16	—	1	—	—	—	N
New Mexico	50	1	3	6	1	2	6
Utah	43	1	12	—	2	1	10
Wyoming	4	—	—	—	—	—	—
Pacific	148	1	34	19	38	2	62
Alaska	21	—	—	8	—	N	N
California	46	1	32	6	20	—	46
Hawaii	22	—	—	1	18	—	1
Oregon	57	—	—	4	N	—	13
Washington	2	—	2	—	N	2	2
American Samoa	—	—	—	—	1	N	N
C.N.M.I.	—	—	—	—	—	—	—
Guam	U	U	U	U	U	U	U
Puerto Rico	1	—	—	—	—	N	N
U.S. Virgin Islands	N	—	—	—	—	—	—

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

TABLE 2. (*Continued*) Reported cases of notifiable diseases,* by geographic division and area — United States, 2008

Area	Hepatitis, viral, acute			Influenza-associated pediatric mortality§§	Legionellosis	Listeriosis	Lyme disease¶¶			Malaria
	A	B	C				Total	Confirmed	Probable	
United States	2,585	4,033	877	90	3,181	759	35,198	28,921	6,277	1,255
New England	128	81	37	9	231	63	11,601	9,205	2,396	61
Connecticut	26	30	19	2	47	16	3,896	2,738	1,158	14
Maine	18	15	3	1	11	5	908	780	128	1
Massachusetts	58	21	13	4	91	30	4,582	3,960	622	33
New Hampshire	12	8	N	1	30	6	1,601	1,211	390	5
Rhode Island	12	4	1	—	47	5	210	186	24	3
Vermont	2	3	1	1	5	1	404	330	74	5
Mid. Atlantic	333	448	131	13	1,061	168	15,097	12,773	2,324	337
New Jersey	86	118	61	1	150	34	3,485	3,214	271	65
New York (Upstate)	66	73	43	3	360	48	6,986	5,203	1,783	42
New York City	113	100	—	5	143	30	808	538	270	188
Pennsylvania	68	157	27	4	408	56	3,818	3,818	—	42
E.N. Central	335	536	195	12	667	104	2,321	1,759	562	152
Illinois	112	184	10	6	121	28	108	108	—	77
Indiana	20	67	13	1	60	10	42	42	—	5
Michigan	119	149	129	1	179	20	92	76	16	18
Ohio	51	118	40	1	268	29	45	40	5	31
Wisconsin	33	18	3	3	39	17	2,034	1,493	541	21
W.N. Central	255	107	27	5	145	31	1,438	1,172	266	72
Iowa	109	24	—	2	21	1	109	85	24	12
Kansas	15	9	1	—	2	6	16	16	—	9
Minnesota	49	25	22	3	25	8	1,282	1,046	236	29
Missouri	35	38	2	—	70	11	6	6	—	14
Nebraska	41	9	2	—	21	4	12	8	4	8
North Dakota	2	2	—	—	3	—	10	8	2	—
South Dakota	4	—	—	—	3	1	3	3	—	—
S. Atlantic	393	981	150	13	508	147	4,331	3,732	599	303
Delaware	7	U	U	—	13	2	772	772	—	3
District of Columbia	U	U	U	—	16	—	74	71	3	7
Florida	146	344	32	4	148	50	88	72	16	65
Georgia	57	187	16	4	43	26	35	35	—	57
Maryland	44	85	22	1	143	17	2,218	1,746	472	80
North Carolina	63	81	46	1	37	25	47	16	31	31
South Carolina	19	71	4	—	12	7	29	14	15	9
Virginia	51	130	8	3	66	17	933	886	47	49
West Virginia	6	83	22	—	30	3	135	120	15	2
E.S. Central	81	409	109	7	119	29	46	19	27	27
Alabama	12	109	13	—	18	4	9	6	3	5
Kentucky	30	101	68	1	58	7	5	5	—	6
Mississippi	7	50	—	4	1	4	1	1	—	1
Tennessee	32	149	28	2	42	14	31	7	24	15
W.S. Central	294	852	89	12	117	60	158	109	49	97
Arkansas	10	67	1	1	14	5	—	—	—	1
Louisiana	12	94	9	—	11	11	3	3	—	4
Oklahoma	13	129	20	2	11	7	2	1	1	5
Texas	259	562	59	9	81	37	153	105	48	87
Mountain	219	202	62	9	100	28	65	32	33	36
Arizona	118	80	—	2	26	8	8	2	6	15
Colorado	36	33	14	2	14	8	3	2	1	5
Idaho	17	12	3	—	3	1	9	5	4	3
Montana	1	2	6	—	4	1	17	6	11	—
Nevada	13	43	22	2	13	1	12	9	3	5
New Mexico	18	12	5	1	11	5	8	4	4	3
Utah	13	14	12	2	29	2	5	3	2	5
Wyoming	3	6	—	—	—	2	3	1	2	—
Pacific	547	417	77	10	233	129	141	120	21	170
Alaska	5	10	—	1	3	3	6	6	—	6
California	446	303	29	6	185	88	74	74	—	125
Hawaii	20	7	—	—	8	3	N	—	—	3
Oregon	25	41	23	1	18	6	38	18	20	4
Washington	51	56	25	2	19	29	23	22	1	32
American Samoa	—	—	—	—	N	N	N	—	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	U	U	U	—	U	U	U	U	U	U
Puerto Rico	27	50	—	—	—	—	N	—	—	2
U.S. Virgin Islands	—	—	—	—	—	—	N	—	—	—

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.
§§ Totals reported to the Division of Influenza, National Center for Immunization and Respiratory Diseases (NCIRD), as of December 31, 2008.
¶¶ National Surveillance Case Definition revised in 2008; probable cases not previously reported.

TABLE 2. (*Continued*) Reported cases of notifiable diseases,* by geographic division and area — United States, 2008

Area	Measles			Meningococcal disease				
	Total	Indigenous	Imported***	All serogroups	Serogroup A, C, Y, and W-135	Serogroup B	Other serogroup	Serogroup unknown
United States	140	115	25	1,172	330	188	38	616
New England	2	1	1	38	15	20	—	3
Connecticut	—	—	—	1	1	—	—	—
Maine	—	—	—	6	3	3	—	—
Massachusetts	2	1	1	24	8	14	—	2
New Hampshire	—	—	—	5	1	3	—	1
Rhode Island	—	—	—	2	2	—	—	—
Vermont	—	—	—	—	—	—	—	—
Mid. Atlantic	32	23	9	128	27	12	—	89
New Jersey	1	—	1	17	—	—	—	17
New York (Upstate)	2	—	2	33	21	11	—	1
New York City	28	22	6	28	—	—	—	28
Pennsylvania	1	1	—	50	6	1	—	43
E.N. Central	42	40	2	211	64	32	3	112
Illinois	32	32	—	88	—	—	—	88
Indiana	—	—	—	27	18	8	—	1
Michigan	4	4	—	35	15	4	1	15
Ohio	—	—	—	40	23	11	1	5
Wisconsin	6	4	2	21	8	9	1	3
W.N. Central	1	1	—	105	39	23	2	41
Iowa	—	—	—	19	12	6	—	1
Kansas	—	—	—	8	1	—	—	7
Minnesota	—	—	—	30	13	13	1	3
Missouri	1	1	—	26	8	—	—	18
Nebraska	—	—	—	13	4	3	1	5
North Dakota	—	—	—	6	—	—	—	6
South Dakota	—	—	—	3	1	1	—	1
S. Atlantic	4	1	3	157	64	43	10	40
Delaware	—	—	—	2	—	—	—	2
District of Columbia	1	1	—	—	—	—	—	—
Florida	1	—	1	51	24	16	2	9
Georgia	1	—	1	18	6	10	—	2
Maryland	—	—	—	19	8	3	3	5
North Carolina	—	—	—	16	6	2	2	6
South Carolina	—	—	—	22	6	10	3	3
Virginia	1	—	1	24	9	2	—	13
West Virginia	—	—	—	5	5	—	—	—
E.S. Central	—	—	—	55	11	7	10	27
Alabama	—	—	—	10	2	2	4	2
Kentucky	—	—	—	10	—	—	—	10
Mississippi	—	—	—	12	7	1	4	—
Tennessee	—	—	—	23	2	4	2	15
W.S. Central	3	2	1	131	58	28	9	36
Arkansas	2	2	—	16	6	2	1	7
Louisiana	1	—	1	26	9	4	1	12
Oklahoma	—	—	—	19	9	4	6	—
Texas	—	—	—	70	34	18	1	17
Mountain	15	14	1	60	36	10	3	11
Arizona	14	13	1	9	6	2	—	1
Colorado	—	—	—	16	12	4	—	—
Idaho	—	—	—	6	1	1	—	4
Montana	—	—	—	4	1	—	—	3
Nevada	—	—	—	7	3	1	1	2
New Mexico	1	1	—	8	7	—	1	—
Utah	—	—	—	8	6	1	1	—
Wyoming	—	—	—	2	—	1	—	1
Pacific	41	33	8	287	16	13	1	257
Alaska	—	—	—	8	—	—	—	8
California	17	13	4	204	—	—	—	204
Hawaii	4	1	3	5	—	2	—	3
Oregon	1	—	1	39	—	—	—	39
Washington	19	19	—	31	16	11	1	3
American Samoa	—	—	—	—	—	—	—	—
C.N.M.I.	—	—	—	—	—	—	—	—
Guam	U	U	U	U	U	U	U	U
Puerto Rico	—	—	—	3	—	—	—	3
U.S. Virgin Islands	—	—	—	—	—	—	—	—

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.
*** Imported cases include only those directly related to importation from other countries.

TABLE 2. (*Continued*) Reported cases of notifiable diseases,* by geographic division and area — United States, 2008

Area	Mumps	Novel influenza A virus infections	Pertussis	Plague	Psittacosis	Q Fever			Rabies	
						Total	Acute	Chronic	Animal	Human
United States	454	2	13,278	3	8	120	106	14	4,196	2
New England	18	—	1,052	1	2	—	—	—	433	—
Connecticut	—	—	55	1	N	—	—	—	202	—
Maine	5	—	49	—	—	—	—	—	64	—
Massachusetts	7	—	800	—	1	—	—	—	—	—
New Hampshire	5	—	49	—	—	—	N	N	58	—
Rhode Island	—	—	87	—	1	—	—	—	34	—
Vermont	1	—	12	—	—	—	N	N	75	—
Mid. Atlantic	71	—	1,311	—	1	17	15	2	944	—
New Jersey	13	—	246	—	1	2	2	—	—	—
New York (Upstate)	19	—	456	—	—	9	7	2	500	—
New York City	18	—	114	—	—	6	6	—	19	—
Pennsylvania	21	—	495	—	—	—	—	—	425	—
E.N. Central	151	—	2,252	—	—	7	6	1	256	—
Illinois	91	—	628	—	—	—	—	—	104	—
Indiana	2	—	270	—	—	1	—	1	10	—
Michigan	22	—	317	—	—	2	2	—	78	—
Ohio	23	—	845	—	—	1	1	—	64	—
Wisconsin	13	—	192	—	—	3	3	—	N	—
W.N. Central	50	1	2,327	—	—	15	15	—	323	1
Iowa	24	—	257	—	—	—	N	N	29	—
Kansas	2	—	106	—	—	2	2	—	68	—
Minnesota	9	—	1,034	—	—	5	5	—	70	—
Missouri	8	—	561	—	—	5	5	—	64	1
Nebraska	4	—	277	—	—	2	2	—	34	—
North Dakota	2	—	25	—	—	—	—	—	34	—
South Dakota	1	1	67	—	—	1	1	—	24	—
S. Atlantic	49	—	1,068	—	3	9	7	2	1,650	—
Delaware	1	—	18	—	—	—	—	—	—	—
District of Columbia	2	—	7	—	—	1	1	—	—	—
Florida	16	—	314	—	2	1	1	—	138	—
Georgia	3	—	115	—	—	2	2	—	386	—
Maryland	11	—	164	—	—	1	1	—	420	—
North Carolina	6	—	94	—	—	2	2	—	N	—
South Carolina	—	—	147	—	1	—	—	—	—	—
Virginia	9	—	198	—	—	2	—	2	620	—
West Virginia	1	—	11	—	—	—	—	—	86	—
E.S. Central	7	—	473	—	—	3	3	—	181	—
Alabama	5	—	69	N	—	2	2	—	—	—
Kentucky	—	—	183	—	—	1	1	—	45	—
Mississippi	—	—	105	—	—	—	—	—	7	—
Tennessee	2	—	116	—	—	—	—	—	129	—
W.S. Central	27	1	2,438	—	—	26	22	4	94	—
Arkansas	5	—	197	—	—	2	2	—	49	—
Louisiana	1	—	95	—	—	—	—	—	—	—
Oklahoma	1	—	100	—	—	—	N	N	43	—
Texas	20	1	2,046	—	N	24	20	4	2	—
Mountain	26	—	885	2	—	19	16	3	108	—
Arizona	5	—	218	1	—	4	3	1	N	—
Colorado	8	—	161	—	—	5	5	—	—	—
Idaho	2	—	40	—	—	1	1	—	11	—
Montana	1	—	84	—	—	1	1	—	13	—
Nevada	6	—	28	—	—	2	2	—	12	—
New Mexico	—	—	94	1	—	3	3	—	30	—
Utah	4	—	242	—	—	3	1	2	14	—
Wyoming	—	—	18	—	—	—	—	—	28	—
Pacific	55	—	1,472	—	2	24	22	2	207	1
Alaska	5	—	277	—	—	—	—	—	15	—
California	31	—	534	—	1	20	18	2	179	1
Hawaii	4	—	20	—	—	3	3	—	—	—
Oregon	1	—	181	—	1	1	1	—	13	—
Washington	14	—	460	—	—	—	—	—	—	—
American Samoa	25	—	—	—	N	—	—	N	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	U	U	U	U	U	U	U	U	U	U
Puerto Rico	3	—	—	—	N	—	—	—	59	—
U.S. Virgin Islands	—	—	—	—	—	—	—	—	N	—

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

TABLE 2. (*Continued*) Reported cases of notifiable diseases,* by geographic division and area — United States, 2008

Area	Rocky Mountain spotted fever††† Total	Rocky Mountain spotted fever††† Confirmed	Rocky Mountain spotted fever††† Probable	Rubella	Salmonellosis	Shiga toxin-producing *E. Coli* (STEC)§§§	Shigellosis	Streptococcal disease, invasive, group A	Streptococcal toxic-shock syndrome
United States	2,563	190	2,367	16	51,040	5,309	22,625	5,674	157
New England	7	—	7	2	2,244	264	243	397	23
Connecticut	—	—	—	1	491	47	40	118	21
Maine	1	—	1	—	159	26	20	28	N
Massachusetts	2	—	2	1	1,227	117	160	176	1
New Hampshire	1	—	1	—	155	34	6	30	—
Rhode Island	3	—	3	—	115	10	12	29	—
Vermont	—	—	—	—	97	30	5	16	1
Mid. Atlantic	154	5	149	4	5,827	476	2,572	1,097	23
New Jersey	85	3	82	—	1,297	138	925	191	4
New York (Upstate)	43	1	42	—	1,491	187	596	347	18
New York City	11	1	10	1	1,276	58	738	207	—
Pennsylvania	15	—	15	3	1,763	93	313	352	1
E.N. Central	150	9	141	2	5,252	876	4,339	1,018	61
Illinois	110	3	107	—	1,522	135	990	279	36
Indiana	6	6	—	—	652	96	607	150	10
Michigan	3	—	3	—	960	219	257	186	1
Ohio	31	—	31	—	1,366	204	1,923	262	13
Wisconsin	—	—	—	2	752	222	562	141	1
W.N. Central	439	22	417	1	2,878	837	953	401	10
Iowa	8	1	7	—	425	208	214	—	—
Kansas	—	—	—	—	467	52	67	41	—
Minnesota	—	—	—	—	748	191	311	185	6
Missouri	407	12	395	—	764	153	227	96	2
Nebraska	20	7	13	—	243	150	16	44	2
North Dakota	1	1	—	1	79	30	42	12	—
South Dakota	3	1	2	—	152	53	76	23	—
S. Atlantic	961	109	852	3	12,837	844	3,248	1,177	19
Delaware	33	1	32	—	148	15	12	11	2
District of Columbia	6	3	3	—	62	6	21	15	—
Florida	19	1	18	3	5,312	146	801	275	N
Georgia	78	78	—	—	2,302	88	1,103	273	—
Maryland	92	8	84	—	884	128	138	198	N
North Carolina	511	10	501	—	1,570	142	275	136	6
South Carolina	57	7	50	—	1,185	46	554	78	—
Virginia	155	1	154	—	1,165	241	310	150	—
West Virginia	10	—	10	—	209	32	34	41	11
E.S. Central	338	13	321	—	3,533	286	1,959	197	4
Alabama	93	2	91	—	1,013	65	427	N	N
Kentucky	1	1	—	—	485	100	264	46	4
Mississippi	11	—	11	—	1,087	5	296	N	N
Tennessee	233	10	219	—	948	116	972	151	—
W.S. Central	465	17	448	—	8,401	535	6,127	598	—
Arkansas	129	2	127	—	797	59	585	11	—
Louisiana	6	2	4	—	1,115	9	640	19	—
Oklahoma	268	10	258	—	906	135	237	142	N
Texas	62	3	59	—	5,583	332	4,665	426	—
Mountain	46	12	32	—	3,425	635	1,261	606	17
Arizona	17	11	6	—	1,154	69	650	204	—
Colorado	1	—	1	—	718	204	150	150	1
Idaho	1	—	1	—	200	149	14	16	—
Montana	3	—	3	—	130	38	8	N	N
Nevada	3	1	2	—	241	19	228	13	3
New Mexico	4	—	4	—	521	52	161	148	—
Utah	7	—	6	—	377	91	42	66	13
Wyoming	10	—	9	—	84	13	8	9	—
Pacific	3	3	—	4	6,643	556	1,923	183	—
Alaska	N	—	—	1	58	6	1	41	—
California	—	—	—	3	5,034	280	1,665	N	N
Hawaii	N	—	—	—	269	13	46	142	—
Oregon	3	3	—	—	436	68	95	N	N
Washington	—	—	—	—	846	189	116	N	N
American Samoa	N	—	—	1	3	—	1	30	N
C.N.M.I.	—	—	—	—	—	—	—	—	—
Guam	U	U	U	U	U	U	U	U	U
Puerto Rico	N	—	—	—	847	—	31	N	N
U.S. Virgin Islands	N	—	—	—	—	—	—	—	—

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

††† Revision of National Surveillance Case Definition distinguishing between confirmed and probable cases. Total count includes six unknown case status reports.

§§§ Includes *E-coli* O157:H7; shiga toxin positive, serogroup non-O157; and shiga toxin positive, not serogrouped.

TABLE 2. (*Continued*) Reported cases of notifiable diseases,* by geographic division and area — United States, 2008

Area	*Streptococcus pneumoniae*, invasive disease, drug-resistant		*Streptococcus pneumoniae*, invasive disease, nondrug-resistant age <5 yrs	Syphilis**			Tetanus	Toxic-shock syndrome	Trichinellosis
	All ages	Age <5 yrs		All stages††	Congenital (age <1 yr)	Primary and secondary			
United States	3,448	532	1,998	46,277	431	13,500	19	71	39
New England	135	19	105	793	2	309	—	3	—
Connecticut	70	7	15	173	2	34	—	N	—
Maine	18	2	3	27	—	10	—	N	—
Massachusetts	—	—	66	479	—	216	—	1	—
New Hampshire	—	—	11	41	—	20	—	2	—
Rhode Island	31	8	10	55	—	18	—	—	—
Vermont	16	2	—	18	—	11	—	—	—
Mid. Atlantic	315	33	277	7,426	35	1,715	4	8	3
New Jersey	—	—	70	1,009	4	226	—	—	1
New York (Upstate)	78	10	116	778	5	146	—	3	1
New York City	127	6	91	4,737	18	1,071	—	—	1
Pennsylvania	110	17	N	902	8	272	4	5	—
E.N. Central	660	85	354	3,412	34	1,320	1	20	1
Illinois	N	N	98	1,565	20	554	—	4	1
Indiana	242	29	44	351	—	140	—	2	—
Michigan	23	2	90	546	10	210	1	10	—
Ohio	395	54	67	763	3	351	—	4	—
Wisconsin	—	—	55	187	1	65	—	—	—
W.N. Central	368	44	124	1,053	2	402	2	10	2
Iowa	—	—	—	75	—	16	—	1	—
Kansas	79	6	N	125	—	30	—	1	—
Minnesota	185	32	51	265	—	116	1	4	1
Missouri	93	3	39	542	2	224	—	2	—
Nebraska	—	—	9	36	—	15	1	1	—
North Dakota	2	—	12	4	—	—	—	—	1
South Dakota	9	3	13	6	—	1	—	1	—
S. Atlantic	1,378	254	375	11,178	68	3,162	2	1	3
Delaware	3	—	—	59	—	16	—	—	—
District of Columbia	N	N	N	370	—	146	—	—	—
Florida	792	161	70	4,585	17	1,044	2	N	1
Georgia	462	79	106	2,833	11	914	—	1	N
Maryland	7	1	62	1,088	23	378	—	N	1
North Carolina	N	N	N	998	10	287	—	—	—
South Carolina	—	—	72	412	2	98	—	—	—
Virginia	N	N	52	789	4	266	—	—	1
West Virginia	114	13	13	44	1	13	—	—	—
E.S. Central	350	61	96	3,424	23	1,139	—	9	—
Alabama	N	N	N	1,187	12	449	—	1	—
Kentucky	80	11	N	218	1	93	—	2	N
Mississippi	44	14	12	736	—	184	—	N	—
Tennessee	226	36	84	1,283	10	413	—	6	—
W.S. Central	108	16	348	9,125	162	2,404	4	1	—
Arkansas	23	5	17	508	9	206	—	1	N
Louisiana	85	11	17	2,024	23	707	1	—	—
Oklahoma	N	N	76	257	3	86	—	N	—
Texas	—	—	238	6,336	127	1,405	3	N	—
Mountain	132	18	270	2,345	43	608	2	9	—
Arizona	—	—	117	1,394	30	317	—	1	—
Colorado	—	—	62	352	—	128	—	4	—
Idaho	N	N	6	26	—	7	1	2	—
Montana	1	—	N	10	—	7	1	N	—
Nevada	55	6	6	325	9	77	—	2	—
New Mexico	—	—	40	189	4	44	—	—	—
Utah	73	12	37	40	—	25	—	—	—
Wyoming	3	—	2	9	—	3	—	—	—
Pacific	2	2	49	7,521	62	2,441	4	10	30
Alaska	—	—	29	9	—	1	—	N	—
California	N	N	N	6,909	62	2,204	4	10	30
Hawaii	2	2	20	68	—	29	—	N	—
Oregon	N	N	N	97	—	26	—	N	—
Washington	N	N	N	438	—	181	—	N	—
American Samoa	N	N	N	—	—	—	—	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—
Guam	U	U	U	45	—	6	U	U	U
Puerto Rico	—	—	N	797	8	167	3	N	N
U.S. Virgin Islands	—	—	N	1	—	—	—	—	—

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

†† Includes the following categories: primary, secondary, latent (including early latent, late latent, and latent syphilis of unknown duration), neurosyphilis, late (including late syphilis with clinical manifestations other than neurosyphilis), and congenital syphilis.

TABLE 2. (*Continued*) Reported cases of notifiable diseases,* by geographic division and area — United States, 2008

Area	Tuberculosis****	Tularemia	Typhoid fever	Vancomycin-intermediate *Staphylococcus aureus*	Varicella		Vibriosis
					Morbidity	Mortality††††	
United States	12,904	123	449	63	30,386	2	588
New England	429	19	23	9	1,729	—	19
Connecticut	98	—	3	2	857	—	14
Maine	9	—	—	—	269	—	3
Massachusetts	261	19	16	7	—	—	—
New Hampshire	19	—	2	N	280	—	2
Rhode Island	36	—	1	—	—	—	—
Vermont	6	—	1	—	323	—	—
Mid. Atlantic	2,009	3	124	22	2,409	2	22
New Jersey	422	2	31	N	N	N	17
New York (Upstate)	305	—	12	6	N	1	N
New York City	895	1	57	16	—	1	5
Pennsylvania	387	—	24	—	2,409	—	N
E.N. Central	1,056	2	44	11	7,805	—	30
Illinois	469	1	18	2	1,489	—	11
Indiana	118	—	1	N	—	—	5
Michigan	188	—	9	6	3,053	—	N
Ohio	213	—	8	3	2,403	—	9
Wisconsin	68	1	8	—	860	—	5
W.N. Central	476	45	25	4	1,418	—	8
Iowa	49	—	6	—	N	N	N
Kansas	57	2	2	N	481	—	N
Minnesota	211	2	7	3	—	—	8
Missouri	107	21	2	1	774	—	N
Nebraska	33	7	3	—	N	N	N
North Dakota	3	3	3	—	108	—	N
South Dakota	16	10	2	—	55	—	N
S. Atlantic	2,630	5	78	7	4,863	—	205
Delaware	23	—	4	—	47	—	4
District of Columbia	54	—	—	N	24	—	2
Florida	954	—	18	3	1,735	—	94
Georgia	478	—	9	1	N	N	18
Maryland	278	1	17	N	N	—	33
North Carolina	335	3	6	3	N	N	13
South Carolina	188	—	4	—	886	—	12
Virginia	292	1	19	—	1,489	—	29
West Virginia	28	—	1	—	682	—	N
E.S. Central	677	4	7	2	1,127	—	42
Alabama	176	—	4	N	1,113	—	23
Kentucky	101	2	—	N	N	N	2
Mississippi	118	—	—	2	14	N	7
Tennessee	282	2	3	—	N	—	10
W.S. Central	1,911	18	39	2	8,688	—	63
Arkansas	83	11	4	—	777	—	N
Louisiana	227	—	—	—	72	—	—
Oklahoma	100	7	3	—	N	N	6
Texas	1,501	—	32	2	7,839	—	57
Mountain	544	17	10	3	2,203	—	24
Arizona	227	—	3	2	—	—	14
Colorado	103	2	4	N	874	—	8
Idaho	11	2	—	N	N	N	N
Montana	9	—	1	N	336	—	N
Nevada	102	2	—	—	N	N	N
New Mexico	60	1	1	N	219	—	2
Utah	27	8	1	1	763	—	—
Wyoming	5	2	—	—	11	—	—
Pacific	3,172	10	99	3	144	—	175
Alaska	50	—	1	N	76	N	1
California	2,695	2	75	N	—	—	104
Hawaii	124	—	7	3	68	—	30
Oregon	75	4	1	N	N	N	11
Washington	228	4	15	N	N	N	29
American Samoa	3	—	6	N	N	N	N
C.N.M.I.	34	—	—	—	—	—	—
Guam	90	U	U	U	U	—	U
Puerto Rico	95	—	—	—	600	N	N
U.S. Virgin Islands	4	—	—	N	—	—	N

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

**** Totals reported to the Division of Tuberculosis Elimination, NCHHSTP, as of May 15, 2009.

†††† Totals reported to the Division of Viral Diseases, National Center for Immunization and Respiratory Diseases (NCIRD), as of June 30, 2009.

TABLE 3. Reported cases and incidence* of notifiable diseases,† by age group — United States, 2008

Disease	<1 yr		1–4 yrs		5–14 yrs		15–24 yrs		25–39 yrs		40–64 yrs		≥65 yrs		Age not stated	Total
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate		
AIDS§	31	(0.73)	588	(14.06)	5,616	(68.31)	11,321	(47.34)	17,411	(27.72)	4,151	(3.89)	62	(0.07)	22	39,202
Botulism, total	106	(2.49)	3	(0.07)	—	(0)	3	(0.01)	4	(0.01)	20	(0.02)	8	(0.01)	1	145
foodborne	—	(0)	1	(0.02)	—	(0)	2	(0.01)	1	(0)	6	(0.01)	7	(0.01)	—	17
infant	106	(2.49)	2	(0.05)	—	(0)	—	(0)	—	(0)	—	(0)	—	(0)	1	109
other (wound and unspecified)	—	(0)	—	(0)	—	(0)	1	(0)	3	(0.01)	14	(0.01)	1	(0)	—	19
Brucellosis	—	(0)	3	(0.07)	8	(0.10)	8	(0.03)	19	(0.03)	24	(0.02)	18	(0.02)	—	80
Chancroid¶	—	(0)	—	(0)	—	(0)	14	(0.06)	10	(0.02)	1	(0)	—	(0)	—	25
Chlamydia trachomatis infections**	—	(0)	—	(0)	—	(0)	856,189	(3580.47)	299,307	(476.45)	35,326	(33.13)	887	(0.97)	3,168	1,210,523
Cholera	—	(0)	—	(0)	—	(0)	—	(0)	2	(0)	1	(0)	2	(0)	—	5
Coccidioidomycosis††	8	(0.19)	36	(0.86)	225	(2.74)	726	(3.04)	1,632	(2.60)	3,169	(2.97)	1,689	(1.84)	38	7,523
Cryptosporidiosis	157	(3.69)	1,845	(44.12)	2,050	(24.93)	1,023	(4.28)	1,769	(2.82)	1,567	(1.47)	618	(0.67)	84	9,113
Cyclosporiasis	—	(0)	3	(0.08)	3	(0.04)	7	(0.03)	30	(0.05)	63	(0.07)	27	(0.03)	6	139
Domestic arboviral diseases§§																
California serogroup virus																
neuroinvasive	1	(0.02)	10	(0.24)	34	(0.41)	—	(0)	2	(0)	4	(0)	4	(0)	—	55
nonneuroinvasive	—	(0)	1	(0.02)	3	(0.04)	—	(0)	1	(0)	2	(0)	—	(0)	—	7
Eastern equine encephalitis virus, neuroinvasive	2	(0.05)	—	(0)	—	(0)	—	(0)	—	(0)	—	(0)	2	(0)	—	4
Powassan virus, neuroinvasive	—	(0)	—	(0)	2	(0.02)	—	(0)	—	(0)	—	(0)	—	(0)	—	2
St. Louis encephalitis virus																
neuroinvasive	—	(0)	—	(0)	—	(0)	—	(0)	3	(0)	5	(0)	—	(0)	—	8
nonneuroinvasive	—	(0)	1	(0.02)	2	(0.02)	—	(0)	—	(0)	2	(0)	—	(0)	—	5
West Nile virus																
neuroinvasive	—	(0)	7	(0.17)	14	(0.17)	42	(0.18)	79	(0.13)	280	(0.26)	267	(0.29)	—	689
nonneuroinvasive	—	(0)	2	(0.05)	22	(0.27)	39	(0.16)	133	(0.21)	361	(0.34)	110	(0.12)	—	667
Ehrlichiosis/Anaplasmosis																
Ehrlichia chaffeensis	1	(0.03)	22	(0.57)	76	(1.01)	62	(0.28)	102	(0.18)	429	(0.44)	256	(0.30)	9	957
Ehrlichia ewingii	—	(0)	—	(0)	—	(0)	1	(0)	2	(0)	2	(0)	4	(0)	—	9
Anaplasma phagocytophilum	—	(0)	6	(0.19)	54	(0.86)	39	(0.21)	95	(0.20)	477	(0.58)	313	(0.44)	25	1,009
Undetermined	—	(0)	4	(0.13)	14	(0.22)	8	(0.04)	21	(0.04)	56	(0.07)	28	(0.04)	1	132
Giardiasis	226	(6.41)	3,427	(98.99)	3,104	(45.60)	1,861	(9.37)	3,416	(6.45)	5,103	(5.67)	1,360	(1.73)	411	18,908
Gonorrhea¶	—	(0)	—	(0)	—	(0)	205,816	(860.70)	100,593	(160.13)	24,765	(23.23)	655	(0.71)	801	336,742
Haemophilus influenzae, invasive disease																
all ages, all serotypes	261	(6.13)	176	(4.21)	91	(1.11)	95	(0.40)	176	(0.28)	720	(0.68)	1,336	(1.46)	31	2,886
age <5 years																
serotype b†	18	(0.42)	12	(0.29)	—	(0)	—	(0)	—	(0)	—	(0)	—	(0)	—	30
nonserotype b	146	(3.43)	98	(2.34)	—	(0)	—	(0)	—	(0)	—	(0)	—	(0)	—	244
unknown serotype	97	(2.28)	66	(1.58)	—	(0)	—	(0)	—	(0)	—	(0)	—	(0)	—	163
Hansen disease (Leprosy)	—	(0)	—	(0)	—	(0)	8	(0.04)	22	(0.04)	22	(0.02)	9	(0.01)	19	80
Hantavirus pulmonary syndrome	—	(0)	—	(0)	—	(0)	3	(0.01)	10	(0.02)	5	(0)	—	(0)	—	18
Hemolytic uremic syndrome, post-diarrheal	14	(0.35)	164	(4.17)	74	(0.96)	17	(0.08)	8	(0.01)	26	(0.03)	24	(0.03)	3	330
Hepatitis, viral, acute																
A	6	(0.14)	60	(0.36)	287	(0.72)	377	(0.89)	620	(1.01)	852	(0.87)	368	(0.97)	15	2,585
B	—	(0)	3	(0.02)	9	(0.02)	307	(0.73)	1,586	(2.58)	1,898	(1.93)	204	(0.54)	26	4,033
C	1	(0.02)	—	(0)	4	(0.01)	160	(0.38)	318	(0.52)	360	(0.37)	27	(0.07)	7	877
Influenza-associated pediatric mortality¶¶	14	(0.33)	29	(0.18)	43	(0.11)	4	(0.03)	—	(0)	—	(0)	—	(0)	—	90
Legionellosis	3	(0.07)	2	(0.05)	9	(0.11)	40	(0.17)	220	(0.35)	1,649	(1.55)	1,241	(1.35)	17	3,181
Listeriosis	93	(2.18)	6	(0.14)	6	(0.07)	34	(0.14)	55	(0.09)	191	(0.18)	361	(0.39)	13	759
Lyme disease, total	51	(1.20)	1,139	(27.23)	5,261	(63.99)	3,182	(13.31)	4,218	(6.71)	12,327	(11.56)	4,532	(4.95)	4,488	35,198
confirmed	47	(1.10)	1,030	(24.63)	4,401	(53.53)	2,516	(10.52)	3,356	(5.34)	10,094	(9.47)	3,555	(3.88)	3,922	28,921
probable	4	(0.09)	109	(2.61)	860	(10.46)	666	(2.79)	862	(1.37)	2,233	(2.09)	977	(1.07)	566	6,277
Malaria	3	(0.07)	45	(1.08)	132	(1.61)	199	(0.83)	367	(0.58)	449	(0.42)	44	(0.05)	16	1,255
Measles, total	17	(0.40)	31	(0.74)	47	(0.57)	16	(0.07)	17	(0.03)	11	(0.01)	—	(0)	1	140
indigenous	13	(0.31)	29	(0.69)	44	(0.54)	12	(0.05)	9	(0.01)	8	(0.01)	—	(0)	—	115
imported	4	(0.09)	2	(0.05)	3	(0.04)	4	(0.02)	8	(0.01)	3	(0)	—	(0)	1	25
Meningococcal disease, all serogroups	160	(3.76)	124	(2.96)	84	(1.02)	208	(0.87)	135	(0.21)	240	(0.23)	214	(0.23)	7	1,172
serogroup A,C,Y, and W-135	31	(0.73)	25	(0.60)	29	(0.35)	53	(0.22)	36	(0.06)	68	(0.06)	87	(0.09)	1	330
serogroup B	46	(1.08)	30	(0.72)	12	(0.15)	40	(0.17)	16	(0.03)	26	(0.02)	15	(0.02)	3	188
other serogroup	5	(0.12)	6	(0.14)	4	(0.05)	8	(0.03)	4	(0.01)	6	(0.01)	5	(0.01)	—	38
serogroup unknown	78	(1.83)	63	(1.51)	39	(0.47)	107	(0.45)	79	(0.13)	140	(0.13)	107	(0.12)	3	616
Mumps	3	(0.07)	57	(1.36)	121	(1.47)	83	(0.35)	73	(0.12)	93	(0.09)	18	(0.02)	6	454
Novel influenza A virus infections	—	(0)	—	(0)	1	(0.01)	1	(0)	—	(0)	—	(0)	—	(0)	—	2
Pertussis	2,180	(51.21)	1,288	(30.80)	4,994	(60.74)	1,385	(5.79)	1,069	(1.70)	1,433	(1.34)	258	(0.28)	671	13,278
Plague	—	(0)	—	(0)	—	(0)	1	(0)	1	(0)	1	(0)	—	(0)	—	3
Psittacosis	—	(0)	—	(0)	1	(0.01)	—	(0)	—	(0)	6	(0.01)	1	(0)	—	8

See footnotes on next page.

TABLE 3. (*Continued*) Reported cases and incidence* of notifiable diseases,† by age group — United States, 2008

Disease	<1 yr		1–4 yrs		5–14 yrs		15–24 yrs		25–39 yrs		40–64 yrs		≥65 yrs		Age not stated	Total
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate		
Q Fever, total	—	(0)	1	(0.02)	—	(0)	7	(0.03)	26	(0.04)	60	(0.06)	25	(0.03)	1	**120**
acute	—	(0)	1	(0.02)	—	(0)	7	(0.03)	23	(0.04)	54	(0.05)	20	(0.02)	1	**106**
chronic	—	(0)	—	(0)	—	(0)	—	(0)	3	(0)	6	(0.01)	5	(0.01)	—	**14**
Rabies																
animal	22	(0.56)	4	(0.10)	2	(0.03)	4	(0.02)	11	(0.02)	12	(0.01)	9	(0.01)	4,132	**4,196**
human	—	(0)	—	(0)	—	(0)	1	(0)	—	(0)	1	(0)	—	(0)	—	**2**
Rocky Mountain spotted fever, total	2	(0.05)	45	(1.08)	223	(2.71)	268	(1.12)	479	(0.76)	1,123	(1.05)	417	(0.46)	6	**2,563**
confirmed	2	(0.05)	4	(0.10)	11	(0.13)	19	(0.08)	34	(0.05)	86	(0.08)	33	(0.04)	1	**190**
probable	—	(0)	41	(0.98)	212	(2.58)	249	(1.04)	443	(0.71)	1,034	(0.97)	383	(0.42)	5	**2,367**
Rubella	3	(0.07)	2	(0.05)	1	(0.01)	—	(0)	4	(0.01)	6	(0.01)	—	(0)	—	**16**
Salmonellosis	5,624	(132.11)	9,095	(217.47)	6,504	(79.11)	4,880	(20.41)	7,024	(11.18)	11,002	(10.32)	5,983	(6.53)	928	**51,040**
Shiga toxin-producing *E. coli* (STEC)	192	(4.51)	1,239	(29.63)	1,140	(13.87)	805	(3.37)	526	(0.84)	787	(0.74)	497	(0.54)	123	**5,309**
Shigellosis	492	(11.56)	7,320	(175.03)	7,781	(94.64)	1,491	(6.24)	2,873	(4.57)	1,952	(1.83)	533	(0.58)	183	**22,625**
Streptococcal disease, invasive, group A	150	(4.36)	300	(8.86)	318	(4.76)	226	(1.16)	643	(1.26)	2,101	(2.42)	1,869	(2.47)	67	**5,674**
Streptococcal, toxic-shock syndrome	1	(0.03)	1	(0.03)	8	(0.13)	6	(0.03)	27	(0.06)	66	(0.09)	47	(0.07)	1	**157**
Streptococcus pneumoniae, invasive disease																
all ages	177	(4.16)	355	(8.49)	96	(1.17)	74	(0.31)	260	(0.41)	1,234	(1.16)	1,251	(1.37)	1	**3,448**
age <5 years																
drug resistant	177	(5.92)	—	(0)	—	(0)	—	(0)	—	(0)	—	(0)	—	(0)	355	**532**
non-drug resistant	696	(22.40)	1,302	(42.67)	—	(0)	—	(0)	—	(0)	—	(0)	—	(0)	—	**1,998**
Syphilis, total, all stages¶	—	(0)	—	(0)	—	(0)	9,013	(37.69)	18,427	(29.33)	16,763	(15.72)	1,535	(1.68)	38	**46,277**
congenital (age <1 yr)	431	(10.12)	—	(0)	—	(0)	—	(0)	—	(0)	—	(0)	—	(0)	—	**431**
primary and secondary¶	—	(0)	—	(0)	—	(0)	3,300	(13.80)	5,798	(9.23)	4,261	(4.00)	105	(0.11)	6	**13,500**
Tetanus	—	(0)	—	(0)	1	(0.01)	1	(0)	3	(0)	6	(0.01)	2	(0)	6	**19**
Toxic-shock syndrome (other than streptococcal)	1	(0.03)	3	(0.10)	13	(0.21)	26	(0.14)	15	(0.03)	9	(0.01)	4	(0.01)	—	**71**
Trichinellosis	—	(0)	1	(0.03)	2	(0.03)	3	(0.01)	16	(0.03)	16	(0.02)	1	(0)	—	**39**
Tuberculosis**	114	(2.68)	382	(2.32)	290	(0.72)	1,440	(3.39)	3,266	(5.29)	4,911	(4.98)	2,500	(6.60)	1	**12,904**
Tularemia	—	(0)	7	(0.17)	18	(0.22)	10	(0.04)	10	(0.02)	49	(0.05)	19	(0.02)	10	**123**
Typhoid fever	2	(0.05)	59	(1.41)	94	(1.14)	83	(0.35)	129	(0.21)	59	(0.06)	14	(0.02)	9	**449**
Vancomycin-intermediate *Staphylococcus aureus* (VISA)	—	(0)	—	(0)	—	(0)	1	(0.01)	3	(0.01)	26	(0.04)	27	(0.04)	6	**63**
Vibriosis	2	(0.06)	11	(0.32)	39	(0.58)	44	(0.23)	103	(0.20)	263	(0.30)	121	(0.17)	5	**588**

* Per 100,000 population.

† No cases of anthrax; diphtheria; Eastern equine encephalitis virus, non-neuroinvasive; poliomyelitis, paralytic; poliovirus infection, nonparalytic; Powassan virus, non-neuroinvasive; rubella, congenital syndrome; severe acute respiratory syndrome-associated coronavirus disease (SARS-CoV); smallpox; vancomycin-resistant *Staphylococcus aureus* (VRSA) infection; western equine encephalitis virus, neuroinvasive and non-neuroinvasive; and yellow fever were reported in 2008. Data on chronic hepatitis B and hepatitis C virus infection (past or present) are not included because they are undergoing data quality review. Data on human immunodeficiency virus (HIV) infections are not included because HIV infection reporting has been implemented on different dates and using different methods than for AIDS case reporting.

§ Total number of AIDS cases reported to the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) through December 31, 2008.

¶ Cases among persons aged <15 years are not shown because some might not be caused by sexual transmission; these cases are included in the totals. Totals reported to the Division of STD Prevention, NCHHSTP, as of May 8, 2009. Includes the following categories: primary, secondary, latent (including early latent, late latent, and latent syphilis of unknown duration), neurosyphilis, late (including late syphilis with clinical manifestations other than neurosyphilis), and congenital syphilis.

** Notifiable in <40 states.

†† Totals reported to the Division of Vector-Borne Diseases, National Center for Emerging and Zoonotic Infectious Diseases, (ArboNET Surveillance), as of May 1, 2009.

§§ Totals reported to the Influenza Division, National Center for Immunization and Respiratory Diseases, as of December 31, 2008.

¶¶ Totals reported to the Division of TB Elimination, NCHHSTP, as of May 15, 2009.

TABLE 4. Reported cases and incidence* of notifiable diseases,† by sex — United States, 2008

Disease	Sex					
	Male		Female		Sex not stated	Total
	No.	Rate	No.	Rate		
AIDS§	29,015	(19.52)	10,186	(6.66)	1	39,202
Botulism, total	75	(0.05)	67	(0.04)	3	145
foodborne	8	(0.01)	9	(0.01)	—	17
infant	56	(2.57)	53	(2.55)	—	109
other (wound and unspecified)	11	(0.01)	5	(0)	3	19
Brucellosis	51	(0.03)	29	(0.02)	—	80
Chancroid¶	11	(0.01)	14	(0.01)	0	25
Chlamydia trachomatis infections¶	313,779	(211.07)	893,004	(583.81)	3,740	1,210,523
Cholera	3	(0)	2	(0)	—	5
Coccidioidomycosis**	4,167	(8.68)	3,308	(6.76)	48	7,523
Cryptosporidiosis	4,525	(3.04)	4,520	(2.95)	68	9,113
Cyclosporiasis	67	(0.05)	71	(0.05)	1	139
Domestic arboviral diseases††						
California serogroup virus						
neuroinvasive	38	(0.03)	17	(0.01)	—	55
nonneuroinvasive	4	(0)	3	(0)	—	7
Eastern equine encephalitis virus, neuroinvasive	3	(0)	1	(0)	—	4
Powassan virus, neuroinvasive	1	(0)	1	(0)	—	2
St. Louis encephalitis virus						
neuroinvasive	4	(0)	4	(0)	—	8
nonneuroinvasive	1	(0)	4	(0)	—	5
West Nile virus						
neuroinvasive	428	(0.29)	261	(0.17)	—	689
nonneuroinvasive	376	(0.25)	290	(0.19)	1	667
Ehrlichiosis/Anaplasmosis						
Ehrlichia chaffeensis	556	(0.41)	396	(0.28)	5	957
Ehrlichia ewingii	5	(0)	4	(0)	—	9
Anaplasma phagocytophilum	594	(0.52)	407	(0.34)	8	1,009
Undetermined	79	(0.07)	53	(0.05)	—	132
Giardiasis	10,664	(8.48)	8,123	(6.27)	121	18,908
Gonorrhea¶	153,103	(102.99)	182,577	(119.36)	1,062	336,742
Haemophilus influenzae, invasive disease, all ages, all serotypes	1,294	(0.87)	1,578	(1.03)	14	2,886
age <5 yrs						
serotype b	19	(0.18)	11	(0.11)	—	30
nonserotype b	136	(1.28)	107	(1.06)	1	244
unknown serotype	100	(0.94)	61	(0.60)	2	163
Hansen disease (Leprosy)	45	(0.03)	16	(0.01)	19	80
Hantavirus pulmonary syndrome	13	(0.01)	5	(0)	—	18
Hemolytic uremic syndrome, post-diarrheal	154	(0.11)	174	(0.12)	2	330
Hepatitis, viral, acute						
A	1,326	(0.89)	1,241	(0.81)	18	2,585
B	2,533	(1.71)	1,491	(0.98)	9	4,033
C	437	(0.30)	423	(0.28)	17	877
Influenza-associated pediatric mortality§§	48	(0.13)	42	(0.12)	—	90
Legionellosis	2,030	(1.37)	1,140	(0.75)	11	3,181
Listeriosis	362	(0.24)	396	(0.26)	1	759
Lyme disease, total	18,911	(12.72)	15,550	(10.17)	737	35,198
confirmed	15,586	(10.48)	12,622	(8.25)	713	28,921
probable	3,325	(2.24)	2,928	(1.91)	24	6,277
Malaria	816	(0.55)	427	(0.28)	12	1,255
Measles, total	69	(0.05)	71	(0.05)	—	140
indigenous	57	(0.04)	58	(0.04)	—	115
imported	12	(0.01)	13	(0.01)	—	25
Meningococcal disease, invasive, all serogroups	544	(0.39)	620	(0.32)	8	1,172
serogroup A,C,Y, and W-135	132	(0.09)	195	(0.13)	3	330
serogroup B	90	(0.06)	97	(0.06)	1	188
other serogroup	27	(0.02)	10	(0.01)	1	38
serogroup unknown	295	(0.20)	318	(0.21)	3	616

See footnotes on next page.

TABLE 4. (*Continued*) Reported cases and incidence* of notifiable diseases,† by sex — United States, 2008

Disease	Sex					
	Male		Female		Sex not stated	Total
	No.	Rate	No.	Rate		
Mumps	258	(0.17)	193	(0.13)	3	**454**
Novel influenza A virus infections	2	(0)	—	(0)	—	**2**
Pertussis	6,058	(4.08)	7,155	(4.68)	65	**13,278**
Plague	3	(0)	—	(0)	—	**3**
Psittacosis	5	(0)	3	(0)	—	**8**
Q Fever, total	97	(0.07)	22	(0.01)	1	**120**
acute	88	(0.06)	17	(0.01)	1	**106**
chronic	9	(0.01)	5	(0)	—	**14**
Rabies						
animal	39	(0.03)	43	(0.03)	4,114	**4,196**
human	2	(0)	—	(0)	—	**2**
Rocky Mountain spotted fever, total	1,481	(1.00)	1,044	(0.68)	38	**2,563**
confirmed	103	(0.07)	85	(0.06)	2	**190**
probable	1,373	(0.92)	958	(0.63)	36	**2,367**
Rubella	6	(0)	10	(0.01)	—	**16**
Salmonellosis	24,313	(16.35)	26,339	(17.22)	388	**51,040**
Shiga toxin-producing *E. coli* (STEC)	2,506	(1.69)	2,760	(1.80)	43	**5,309**
Shigellosis	10,511	(7.07)	11,950	(7.81)	164	**22,625**
Streptococcal disease, invasive, group A	2,973	(2.45)	2,679	(2.14)	22	**5,674**
Streptococcal, toxic-shock syndrome	70	(0.07)	87	(0.08)	—	**157**
Streptococcus pneumoniae, invasive disease, all ages	1,677	(1.59)	1,766	(1.62)	5	**3,448**
age <5 years						
drug resistant	286	(3.69)	244	(3.30)	2	**532**
non-drug resistant	1,156	(14.90)	835	(11.28)	7	**1,998**
Syphilis, total, all stages¶	33,298	(22.40)	12,924	(8.45)	55	**46,277**
congenital (age <1 yr)¶	225	(10.33)	181	(8.71)	25	**431**
primary and secondary¶	11,255	(7.57)	2,242	(1.47)	3	**13,500**
Tetanus	12	(0.01)	7	(0)	—	**19**
Toxic-shock syndrome	11	(0.01)	60	(0.05)	—	**71**
Trichinellosis	25	(0.02)	14	(0.01)	—	**39**
Tuberculosis¶¶	7,942	(5.34)	4,961	(3.24)	1	**12,904**
Tularemia	86	(0.06)	35	(0.02)	2	**123**
Typhoid fever	235	(0.16)	208	(0.14)	6	**449**
Vancomycin-intermediate *Staphylococcus aureus* (VISA)	36	(0.03)	27	(0.03)	—	**63**
Vibriosis	348	(0.29)	138	(0.11)	102	**588**

* Per 100,000 population.

† No cases of anthrax; diphtheria; eastern equine encephalitis virus, non-neuroinvasive; poliomyelitis, paralytic; poliovirus infection, nonparalytic; Powassan virus, non-neuroinvasive; rubella, congenital syndrome; severe acute respiratory syndrome-associated coronavirus disease (SARS-CoV); smallpox; vancomycin-resistant *Staphylococcus aureus* (VRSA) infection; western equine encephalitis virus, neuroinvasive and non-neuroinvasive; and yellow fever were reported in 2008. Data on chronic hepatitis B and hepatitis C virus infection (past or present) are not included because they are undergoing data quality review. Data on human immunodeficiency virus (HIV) infections are not included because HIV infection reporting has been implemented on different dates and using different methods than for AIDS case reporting.

§ Total number of AIDS cases reported to the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) through December 31, 2008.

¶ Totals reported to the Division of STD Prevention, NCHHSTP, as of May 8, 2009.

** Notifiable in <40 states.

†† Totals reported to the Division of Vector-Borne Diseases, National Center for Emerging and Zoonotic Infectious Diseases, (ArboNET Surveillance), as of May 1, 2009.

§§ Totals reported to the Influenza Division, National Center for Immunization and Respiratory Diseases, as of December 31, 2008.

¶¶ Totals reported to the Division of TB Elimination, NCHHSTP, as of May 15, 2009.

TABLE 5. Reported cases and incidence* of notifiable diseases,† by race — United States, 2008

Disease	American Indian or Alaska Native		Asian or Pacific Islander		Black		White		Other	Race not stated	Total
	No.	Rate	No.	Rate	No.	Rate	No.	Rate			
AIDS§	225	(6.95)	621	(4.20)	19,448	(48.58)	15,423	(6.33)	431	3,054	**39,202**
Botulism, total	8	(0.25)	5	(0.03)	6	(0.01)	75	(0.03)	2	49	**145**
infant	1	(2.13)	5	(2.31)	3	(0.42)	63	(1.92)	1	36	**109**
Brucellosis	0	(0)	2	(0.01)	3	(0.01)	33	(0.01)	5	37	**80**
Chancroid¶	0	(0)	1	(0.01)	10	(0.02)	12	(0)	0	2	**25**
Chlamydia trachomatis infections**	15,052	(465.18)	16,795	(113.68)	426,416	(1065.3)	343,574	(141.05)	39,239	369,447	**1,210,523**
Coccidioidomycosis††	78	(5.73)	139	(2.10)	310	(2.87)	1,998	(2.56)	169	4,829	**7,523**
Cryptosporidiosis	39	(1.21)	83	(0.56)	717	(1.79)	5,494	(2.26)	185	2,595	**9,113**
Cyclosporiasis	0	(0)	0	(0)	4	(0.01)	90	(0.04)	1	44	**139**
Domestic arboviral diseases§§											
California serogroup virus, neuroinvasive	0	(0)	0	(0)	0	(0)	48	(0.02)	1	6	**55**
West Nile virus											
neuroinvasive	12	(0.37)	7	(0.05)	63	(0.16)	487	(0.20)	11	109	**689**
nonneuroinvasive	8	(0.25)	4	(0.03)	19	(0.05)	458	(0.19)	11	167	**667**
Ehrlichiosis/Anaplasmosis											
Ehrlichia chaffeensis	21	(0.82)	2	(0.02)	19	(0.05)	672	(0.30)	16	227	**957**
Anaplasma phagocytophilum	12	(0.59)	3	(0.04)	7	(0.02)	534	(0.28)	8	445	**1,009**
Undetermined	0	(0)	0	(0)	1	(0)	82	(0.04)	2	47	**132**
Giardiasis	70	(2.42)	1,203	(8.89)	1,333	(4.03)	7,892	(3.84)	752	7,658	**18,908**
Gonorrhea¶¶	2,264	(69.97)	2,300	(15.57)	189,160	(472.56)	62,631	(25.71)	6,987	73,400	**336,742**
Haemophilus influenzae, invasive disease, all ages, all serotypes	47	(1.45)	36	(0.24)	341	(0.85)	1,759	(0.72)	84	619	**2,886**
age <5 years											
serotype b	1	(0.45)	—	(0)	4	(0.12)	16	(0.10)	3	6	**30**
nonserotype b	9	(4.03)	3	(0.28)	43	(1.26)	123	(0.77)	14	52	**244**
unknown serotype	10	(4.47)	2	(0.19)	24	(0.70)	66	(0.41)	8	53	**163**
Hansen disease (Leprosy)	0	(0)	16	(0.12)	5	(0.01)	21	(0.01)	1	37	**80**
Hemolytic uremic syndrome, post-diarrheal	8	(0.26)	6	(0.04)	13	(0.03)	224	(0.10)	10	69	**330**
Hepatitis, viral, acute											
A	19	(0.59)	180	(1.22)	147	(0.37)	1,388	(0.57)	111	740	**2,585**
B	42	(1.30)	102	(0.69)	815	(2.06)	2,003	(0.83)	103	968	**4,033**
C	15	(0.47)	4	(0.03)	56	(0.14)	585	(0.24)	25	192	**877**
Influenza-associated pediatric mortality¶¶	1	(0.11)	2	(0.06)	15	(0.12)	59	(0.10)	0	13	**90**
Legionellosis	7	(0.22)	44	(0.30)	522	(1.30)	2,023	(0.83)	63	522	**3,181**
Listeriosis	6	(0.19)	32	(0.22)	69	(0.17)	457	(0.19)	20	175	**759**
Lyme disease, total	104	(3.21)	249	(1.69)	298	(0.74)	19,799	(8.13)	1,405	13,343	**35,198**
confirmed	88	(2.72)	198	(1.34)	232	(0.58)	16,024	(6.58)	1,366	11,013	**28,921**
probable	16	(0.49)	51	(0.35)	66	(0.16)	3,775	(1.55)	39	2,330	**6,277**
Malaria	4	(0.12)	134	(0.91)	627	(1.57)	171	(0.07)	45	274	**1,255**
Measles, total	0	(0)	7	(0.05)	3	(0.01)	113	(0.05)	0	17	**140**
indigenous	0	(0)	2	(0.01)	3	(0.01)	94	(0.04)	0	16	**115**
imported	0	(0)	5	(0.03)	0	(0)	19	(0.01)	0	1	**25**
Meningococcal disease, invasive, all serogroups	12	(0.37)	29	(0.20)	172	(0.43)	655	(0.27)	28	276	**1,172**
serogroup A,C,Y, and W-135	4	(0.12)	2	(0.01)	53	(0.13)	200	(0.08)	9	62	**330**
serogroup B	1	(0.03)	5	(0.03)	12	(0.03)	128	(0.05)	3	39	**188**
other serogroup	0	(0)	0	(0)	0	(0)	31	(0.01)	1	6	**38**
serogroup unknown	7	(0.22)	22	(0.15)	107	(0.27)	296	(0.12)	15	169	**616**
Mumps	6	(0.19)	25	(0.17)	26	(0.06)	263	(0.11)	22	112	**454**
Pertussis	109	(3.37)	145	(0.98)	571	(1.43)	9,104	(3.74)	321	3,028	**13,278**
Q Fever, total	1	(0.03)	0	(0)	4	(0.01)	82	(0.03)	3	30	**120**
acute	1	(0.03)	0	(0)	4	(0.01)	72	(0.03)	2	27	**106**
Rabies, animal	0	(0)	0	(0)	0	(0)	23	(0.01)	2	4,171	**4,196**
Rocky Mountain spotted fever, total	104	(3.21)	9	(0.06)	85	(0.21)	1,703	(0.70)	37	625	**2,563**
confirmed	11	(0.34)	3	(0.02)	4	(0.01)	134	(0.06)	1	37	**190**
probable	93	(2.87)	6	(0.04)	81	(0.20)	1,568	(0.64)	36	583	**2,367**
Salmonellosis	428	(13.23)	1,202	(8.14)	4,183	(10.45)	28,167	(11.56)	1,439	15,621	**51,040**
Shiga toxin-producing *E. coli* (STEC)	36	(1.11)	79	(0.53)	208	(0.52)	3,391	(1.39)	103	1,492	**5,309**
Shigellosis	259	(8.00)	238	(1.61)	4,246	(10.61)	10,219	(4.20)	797	6,866	**22,625**
Streptococcal disease, invasive, group A	113	(4.59)	107	(1.17)	792	(2.28)	3,221	(1.61)	157	1,284	**5,674**
Streptococcal, toxic-shock syndrome	0	(0)	2	(0.02)	19	(0.06)	114	(0.06)	2	20	**157**

See footnotes on next page.

TABLE 5. (*Continued*) Reported cases and incidence* of notifiable diseases,† by race — United States, 2008

Disease	American Indian or Alaska Native		Asian or Pacific Islander		Black		White		Other	Race not stated	Total
	No.	Rate	No.	Rate	No.	Rate	No.	Rate			
Streptococcus pneumoniae, invasive disease, all ages	10	(0.50)	21	(0.27)	710	(2.40)	2,136	(1.22)	87	484	**3,448**
drug resistant (age <5 yrs)	4	(2.38)	7	(1.09)	127	(4.67)	300	(2.58)	17	77	**532**
non-drug resistant (age <5 yrs)	63	(37.47)	41	(6.41)	356	(13.09)	945	(8.13)	67	526	**1,998**
Syphilis, total, all stages¶	290	(8.96)	952	(6.44)	21,228	(53.03)	17,994	(7.39)	2,386	3,427	**46,277**
congenital (age <1 yr)¶	6	(12.80)	7	(3.24)	216	(30.19)	180	(5.49)	7	15	**431**
primary and secondary¶	62	(1.92)	217	(1.47)	6,434	(16.07)	5,728	(2.35)	514	545	**13,500**
Toxic-shock syndrome (other than streptococcal)	0	(0)	4	(0.04)	4	(0.01)	44	(0.02)	4	15	**71**
Trichinellosis	0	(0)	28	(0.19)	0	(0)	7	(0)	0	4	**39**
Tuberculosis††	166	(5.13)	3,414	(23.11)	3,405	(8.51)	5,730	(2.35)	125	64	**12,904**
Tularemia	6	(0.19)	0	(0)	7	(0.02)	88	(0.04)	1	21	**123**
Typhoid fever	1	(0.03)	194	(1.31)	40	(0.10)	39	(0.02)	32	143	**449**
Vancomycin-intermediate *Staphylococcus aureus* (VISA)	0	(0)	3	(0.04)	10	(0.03)	19	(0.01)	1	30	**63**
Vibriosis	2	(0.07)	23	(0.17)	35	(0.10)	278	(0.14)	9	241	**588**

* Per 100,000 population. Diseases for which <25 cases were reported are not included in this table.

† No cases of anthrax; diphtheria; eastern equine encephalitis virus, non-neuroinvasive; poliomyelitis, paralytic; poliovirus infection, nonparalytic; Powassan virus, non-neuroinvasive; rubella; congenital syndrome; severe acute respiratory syndrome-associated coronavirus disease (SARS-CoV); smallpox, vancomycin-resistant *Staphylococcus aureus* (VRSA) infection; western equine encephalitis virus, neuroinvasive and non-neuroinvasive; and yellow fever were reported in 2008. Data on chronic hepatitis B and hepatitis C virus infection (past or present) are not included because they are undergoing data quality review. Data on human immunodeficiency virus (HIV) infections are not included because HIV infection reporting has been implemented on different dates and using different methods than for AIDS case reporting.

§ Total number of AIDS cases reported to the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) through December 31, 2008.

¶ Cases with unknown race have not been redistributed. For this reason, the total number of cases reported here might differ slightly from totals reported in other surveillance summaries. Totals reported to the Division of STD Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD Prevention, NCHHSTP, as of May 8, 2009.

** Notifiable in <40 states.

†† Totals reported to the Division of Vector-Borne Diseases, National Center for Emerging and Zoonotic Infectious Diseases (ArboNET Surveillance), as of May 1, 2009.

§§ Totals reported to the Influenza Division, National Center for Immunization and Respiratory Diseases, as of December 31, 2008.

¶¶ Totals reported to the Division of TB Elimination, NCHHSTP, as of May 15, 2009.

TABLE 6. Reported cases and incidence* of notifiable diseases,† by ethnicity — United States, 2008

Disease	Hispanic		Non—Hispanic		Ethnicity not stated	Total
	No.	Rate	No.	Rate		
AIDS§	7,108	(15.62)	30,192	(11.79)	1,902	**39,202**
Botulism, total	29	(0.06)	73	(0.03)	43	**145**
infant	21	(2.16)	56	(1.77)	32	**109**
Brucellosis	43	(0.09)	23	(0.01)	14	**80**
Chancroid¶	5	(0.01)	17	(0.01)	3	**25**
Chlamydia trachomatis infections¶	167,306	(367.67)	570,526	(222.76)	472,691	**1,210,523**
Coccidioidomycosis**	1,020	(5.43)	1,759	(2.25)	4,744	**7,523**
Cryptosporidiosis	755	(1.66)	4,602	(1.80)	3,756	**9,113**
Cyclosporiasis	14	(0.03)	91	(0.04)	34	**139**
Domestic arboviral diseases††						
California serogroup virus, neuroinvasive	0	(0)	34	(0.01)	21	**55**
West Nile virus						
neuroinvasive	137	(0.30)	412	(0.16)	140	**689**
nonneuroinvasive	72	(0.16)	379	(0.15)	216	**667**
Ehrlichiosis/Anaplasmosis						
Ehrlichia chaffeensis	31	(0.07)	592	(0.25)	334	**957**
Anaplasma phagocytophilum	16	(0.06)	380	(0.19)	613	**1,009**
Undetermined	1	(0)	61	(0.03)	70	**132**
Giardiasis	1,436	(4.01)	8,275	(3.77)	9,197	**18,908**
Gonorrhea¶	23,888	(52.50)	192,110	(75.01)	120,744	**336,742**
Haemophilus influenzae, invasive disease, all ages, all serotypes	190	(0.42)	1,463	(0.57)	1,233	**2,886**
age <5 years						
serotype b	6	(0.12)	12	(0.08)	12	**30**
nonserotype b	51	(1.04)	126	(0.80)	67	**244**
unknown serotype	14	(0.28)	69	(0.44)	80	**163**
Hansen disease (Leprosy)	25	(0.06)	27	(0.01)	28	**80**
Hemolytic uremic syndrome, post-diarrheal	47	(0.11)	202	(0.09)	81	**330**
Hepatitis, viral, acute						
A	470	(1.03)	1,357	(0.53)	758	**2,585**
B	373	(0.82)	2,257	(0.89)	1,403	**4,033**
C	57	(0.13)	461	(0.18)	359	**877**
Influenza-associated pediatric mortality§§	20	(0.13)	58	(0.10)	12	**90**
Legionellosis	131	(0.29)	1,803	(0.70)	1,247	**3,181**
Listeriosis	132	(0.29)	389	(0.15)	238	**759**
Lyme disease, total	469	(1.03)	13,347	(5.21)	21,382	**35,198**
confirmed	365	(0.80)	10,933	(4.27)	17,623	**28,921**
probable	104	(0.23)	2,414	(0.94)	3,759	**6,277**
Malaria	40	(0.09)	824	(0.32)	391	**1,255**
Measles, total	11	(0.02)	92	(0.04)	37	**140**
indigenous	11	(0.02)	71	(0.03)	33	**115**
imported	0	(0)	21	(0.01)	4	**25**
Meningococcal disease, invasive, all serogroups	147	(0.32)	659	(0.26)	366	**1,172**
serogroup A,C,Y, and W-135	40	(0.09)	178	(0.07)	112	**330**
serogroup B	22	(0.05)	106	(0.04)	60	**188**
other serogroup	4	(0.01)	21	(0.01)	13	**38**
serogroup unknown	81	(0.18)	354	(0.14)	181	**616**
Mumps	74	(0.16)	249	(0.10)	131	**454**
Pertussis	1,462	(3.21)	7,901	(3.08)	3,915	**13,278**
Q Fever, total	17	(0.04)	68	(0.03)	35	**120**
acute	17	(0.04)	57	(0.02)	32	**106**
Rabies, animal	0	(0)	0	(0)	—	**4,196**
Rocky Mountain spotted fever, total	82	(0.18)	1,631	(0.64)	850	**2,563**
confirmed	5	(0.01)	125	(0.05)	60	**190**
probable	76	(0.17)	1,505	(0.59)	786	**2,367**
Salmonellosis	6,888	(15.14)	25,028	(9.77)	19,124	**51,040**
Shiga toxin-producing *E. coli* (STEC)	460	(1.01)	2,926	(1.14)	1,923	**5,309**
Shigellosis	5,295	(11.64)	9,446	(3.69)	7,884	**22,625**

See footnotes on next page.

TABLE 6. (*Continued*) Reported cases and incidence* of notifiable diseases,† by ethnicity — United States, 2008

Disease	Hispanic		Non—Hispanic		Ethnicity not stated	Total
	No.	Rate	No.	Rate		
Streptococcal disease, invasive, group A	432	(1.39)	2,712	(1.26)	2,530	**5,674**
Streptococcal, toxic-shock syndrome	7	(0.03)	82	(0.04)	68	**157**
Streptococcus pneumoniae, invasive disease, all ages	210	(0.79)	1,987	(1.18)	1,251	**3,448**
age <5 years						
drug resistant	56	(1.76)	296	(2.47)	180	**532**
non-drug resistant	295	(9.27)	916	(7.65)	787	**1,998**
Syphilis, total, all stages¶	9,778	(21.49)	29,766	(11.62)	6,733	**46,277**
congenital (age <1 yr)¶	133	(13.70)	285	(9.02)	13	**431**
primary and secondary¶	2,053	(4.51)	9,621	(3.76)	1,826	**13,500**
Toxic-shock syndrome	2	(0.01)	38	(0.02)	31	**71**
Trichinellosis	3	(0.01)	33	(0.01)	3	**39**
Tuberculosis¶¶	3,798	(8.35)	9,075	(3.54)	31	**12,904**
Tularemia	3	(0.01)	81	(0.03)	39	**123**
Typhoid fever	34	(0.07)	282	(0.11)	133	**449**
Vancomycin-intermediate *Staphylococcus aureus* (VISA)	2	(0.01)	26	(0.01)	35	**63**
Vibriosis	44	(0.11)	289	(0.14)	255	**588**

* Per 100,000 population. Diseases for which <25 cases were reported are not included in this table.

† No cases of anthrax; diphtheria; eastern equine encephalitis virus, non-neuroinvasive; poliomyelitis, paralytic; poliovirus infection, nonparalytic; Powassan virus, non-neuroinvasive; rubella, congenital syndrome; severe acute respiratory syndrome-associated coronavirus disease (SARS-CoV); smallpox; vancomycin-resistant *Staphylococcus aureus* (VRSA) infection; western equine encephalitis virus, neuroinvasive and non-neuroinvasive; and yellow fever were reported in 2008. Data on chronic hepatitis B and hepatitis C virus infection (past or present) are not included because they are undergoing data quality review. Data on human immunodeficiency virus (HIV) infections are not included because HIV infection reporting has been implemented on different dates and using different methods than for AIDS case reporting.

§ Total number of AIDS cases reported to the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) through December 31, 2008.

¶ Cases with unknown race have not been redistributed. For this reason, the total number of cases reported here might differ slightly from totals reported in other surveillance summaries. Totals reported to the Division of STD Prevention, NCHHSTP, as of May 8, 2009.

** Notifiable in <40 states.

†† Totals reported to the Division of Vector-Borne Diseases, National Center for Emerging and Zoonotic Infectious Diseases (ArboNET Surveillance), as of May 1, 2009.

§§ Totals reported to the Influenza Division, National Center for Immunization and Respiratory Diseases, as of December 31, 2008.

¶¶ Totals reported to the Division of TB Elimination, NCHHSTP, as of May 15, 2009.

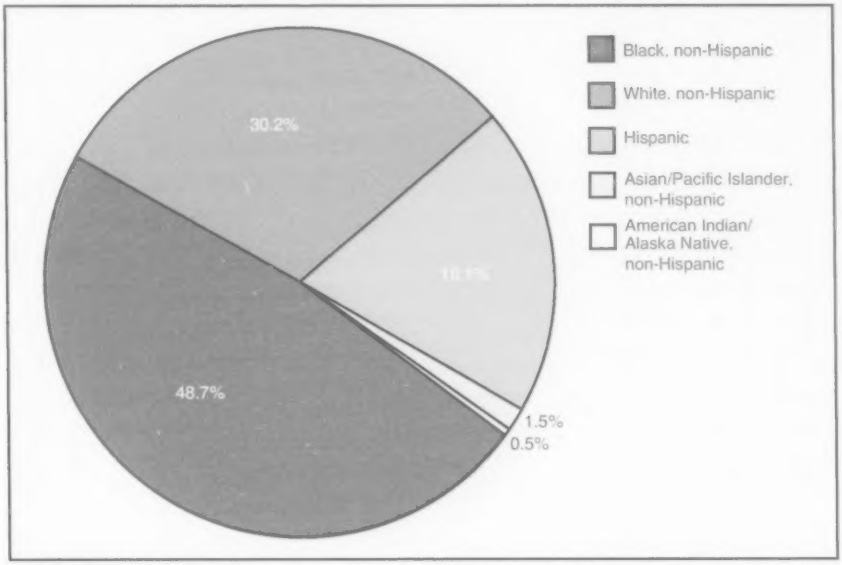
PART 2

Graphs and Maps for Selected Notifiable Diseases in the United States, 2008

Abbreviations and Symbols Used in Graphs and Maps

U	Data not available.
N	Not reportable (i.e., report of disease not required in that jurisdiction).
DC	District of Columbia
AS	American Samoa
CNMI	Commonwealth of Northern Mariana Islands
GU	Guam
PR	Puerto Rico
VI	U.S. Virgin Islands

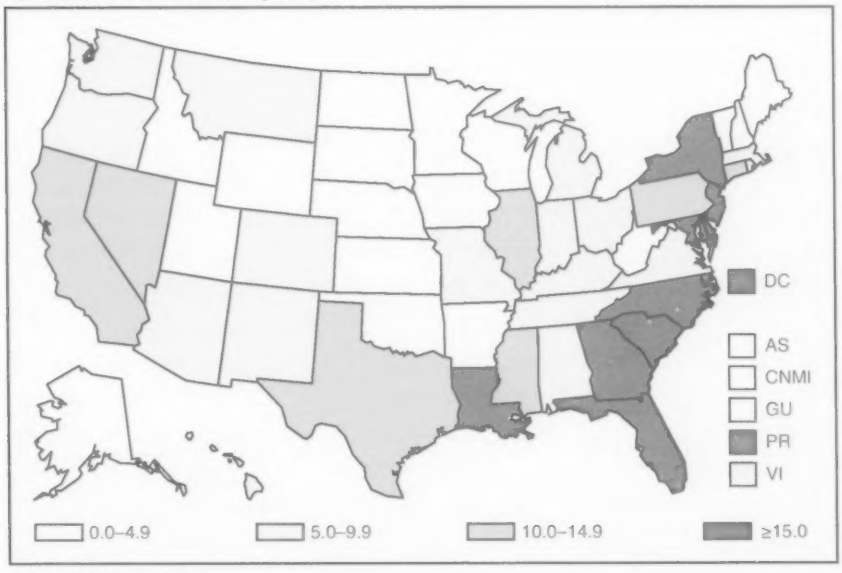
ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS). Percentage of reported cases, by race/ethnicity* — United States, 2008



* For 0.9% of respondents, race/ethnicity was unknown.

Of persons reported with AIDS in 2008, the greatest percentage was among non-Hispanic blacks, followed by non-Hispanic whites, Hispanics, Asians/Pacific Islanders, and American Indians/Alaska Natives.

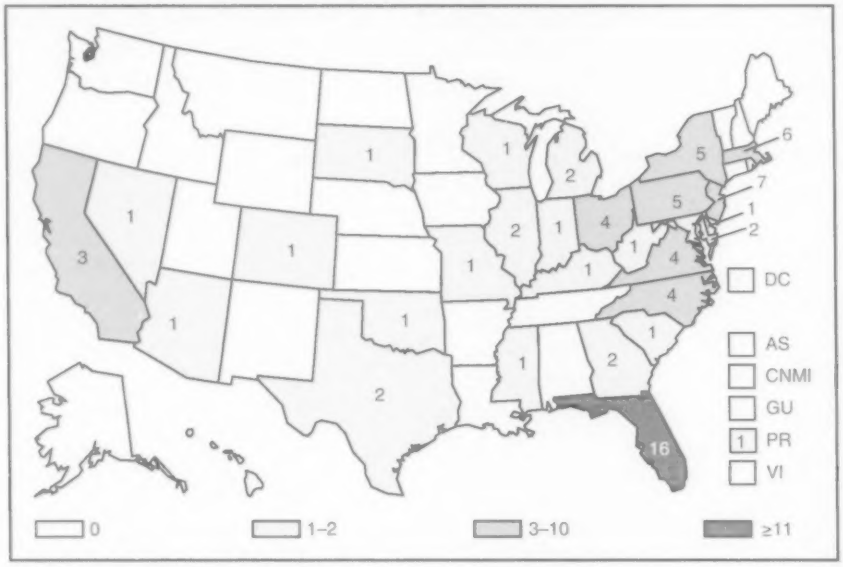
ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS). Reported AIDS rates* — United States† and U.S. territories, 2008



* Per 100,000 population.
† Includes 672 persons with unknown state of residence.

High rates (i.e., ≥15 cases per 100,000 population) of reported AIDS cases were observed in certain states in the Southeast and Northeast. Rates ≥15 cases per 100,000 population also were observed in Washington DC, and Puerto Rico.

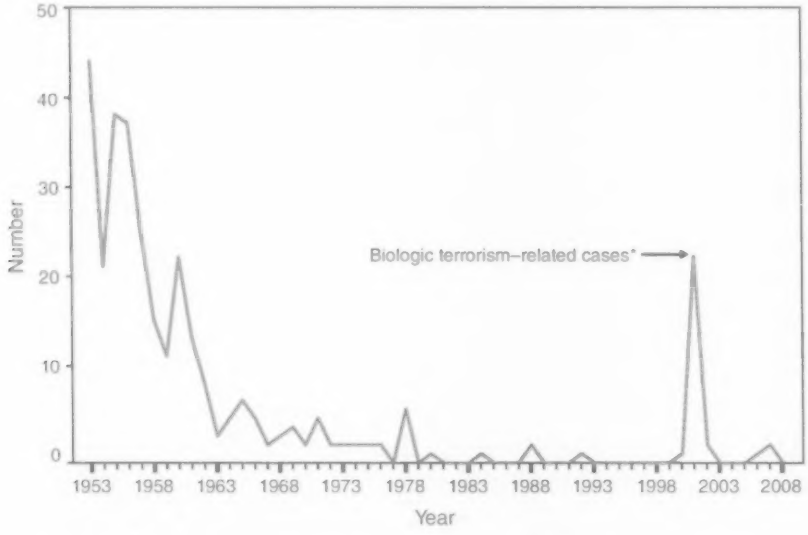
ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS). Number of reported pediatric cases* — United States† and U.S. Territories, 2008



* Children and adolescents aged <13 years.
† Includes two persons with unknown state of residence.

During 2008, a total of 80 pediatric AIDS cases were reported in the United States and U.S. territories.

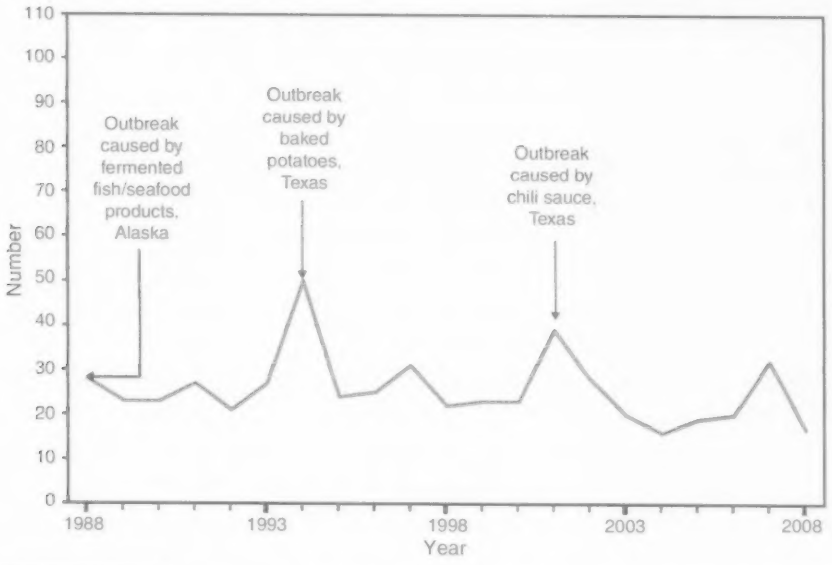
ANTHRAX. Number of reported cases, by year — United States, 1953–2008



* One epizootic-associated cutaneous case was reported in 2001 from Texas.

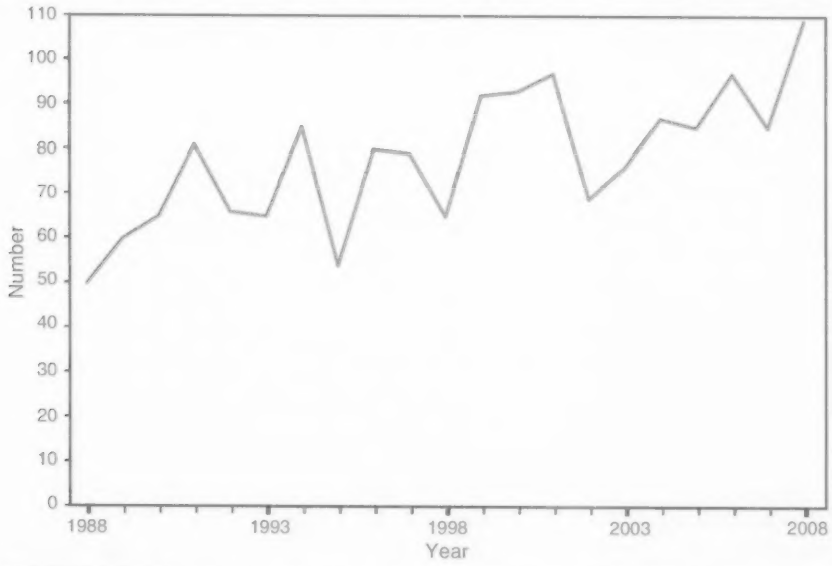
No cases of anthrax were reported to CDC in 2008, and the number of naturally occurring cases reported in the United States and U.S. territories has remained two or fewer per year for the past 30 years. In 2006 and 2007, anthrax cases resulting from a previously unrecognized source of risk for serious illness from anthrax were reported, occurring among persons who make drums using untreated animal hides from countries where anthrax is common in animals and in persons exposed to environments cross-contaminated by these activities. Such cases constitute half of the naturally occurring cases reported to CDC during the past 10 years.

BOTULISM, FOODBORNE. Number of reported cases, by year — United States, 1988–2008



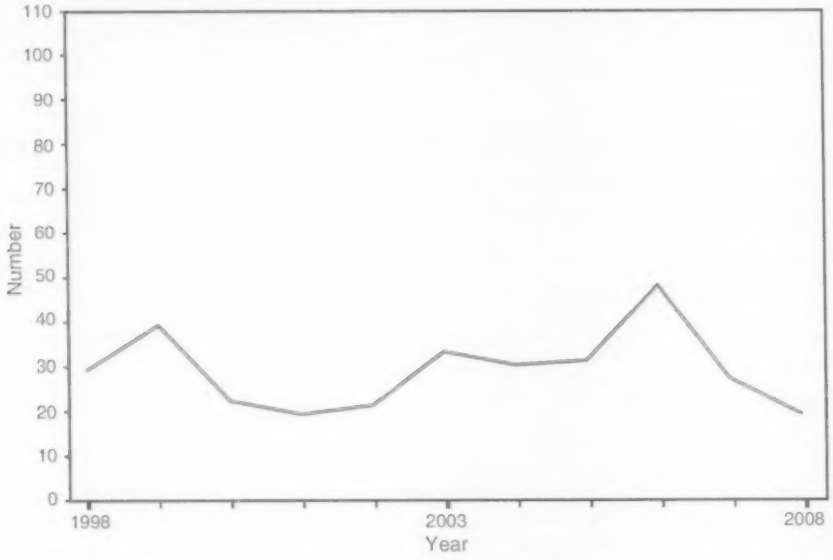
Rates of foodborne botulism have remained relatively stable during the past two decades. In 2008, all cases were caused by home-canned or other home-prepared foods.

BOTULISM, INFANT. Number of reported cases, by year — United States, 1988–2008



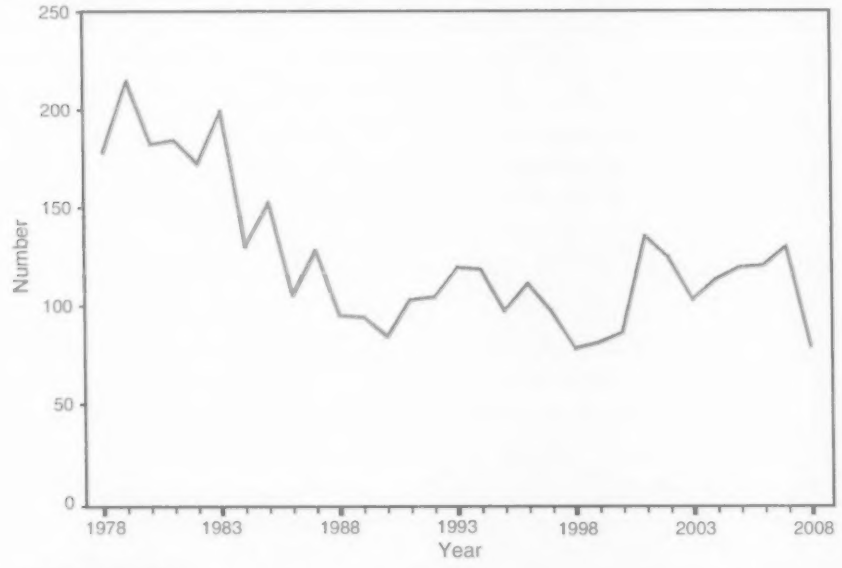
Infant botulism remains the most common cause of botulism in the United States and accounted for 73% of U.S. botulism cases in 2008.

BOTULISM, OTHER (includes wound and unspecified). Number of reported cases, by year — United States, 1998–2008



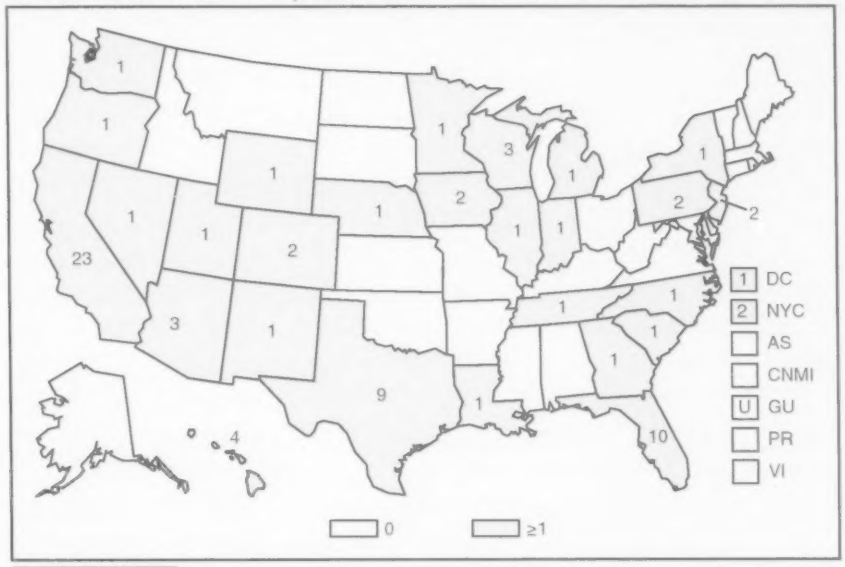
Annual numbers of wound and unspecified forms of botulism have remained stable during the past decade. In 2008, a majority (96%) of cases occurred among injection-drug users in California, Washington, and Texas.

BRUCELLOSIS. Number of reported cases, by year — United States, 1978–2008



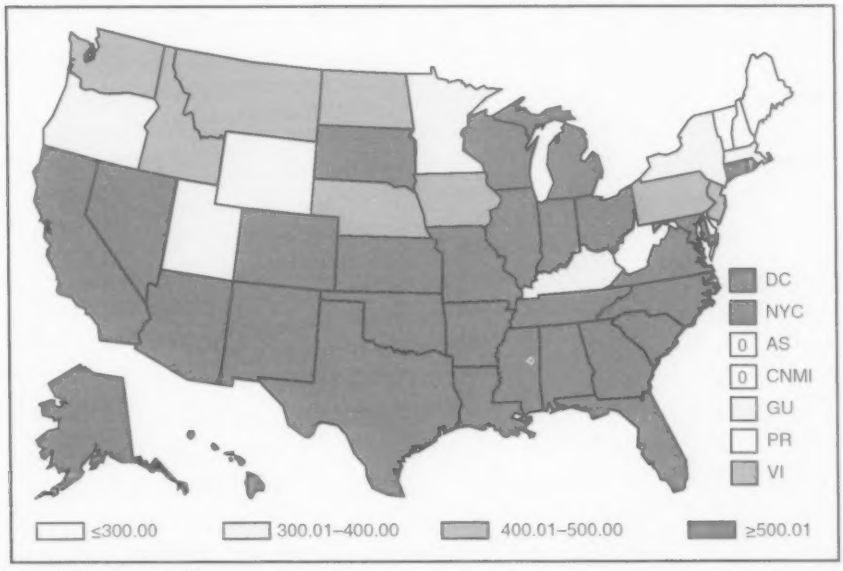
The incidence of brucellosis in the United States increased slightly during 2003–2007. In 2008, the number of cases reported to CDC decreased. Although brucellosis in cattle is in the final stages of eradication, the disease persists in feral swine, elk, and bison, increasing the risk of transmission to hunters while they clean and dress these animals. Outside of the United States, brucellosis remains endemic in several areas, including Mexico and the Mediterranean region, which poses a greater risk of infection to travelers who consume unpasteurized milk products, including soft cheeses.

BRUCELLOSIS. Number of reported cases — United States and U.S. territories, 2008



Reports of brucellosis cases are more frequent along the southern U.S. border, as the disease remains endemic in Mexico. Consumption of unpasteurized milk products, including soft cheeses from regions where brucellosis is common in cattle, sheep, and goats, presents a substantial risk. Brucellosis caused by contact with infected feral swine while hunting has been documented in several southern and western states.

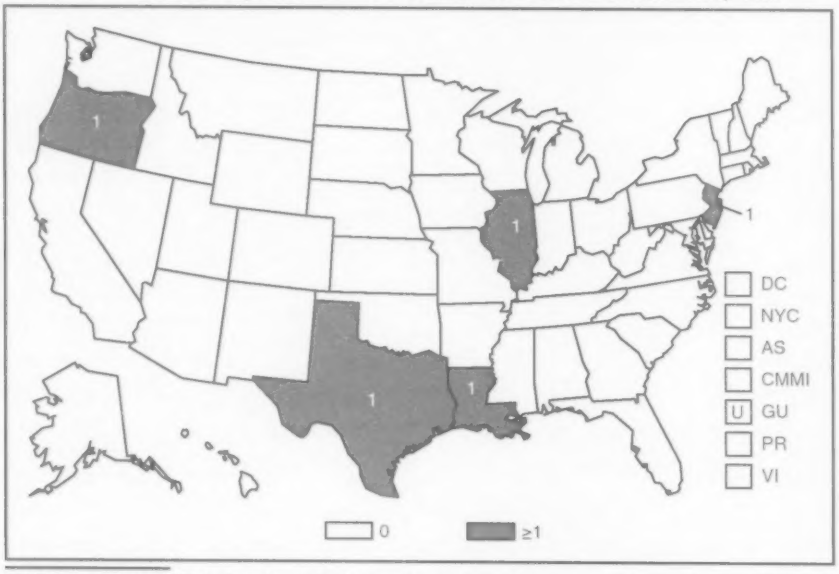
***CHLAMYDIA*. Incidence* among women — United States and U.S. territories, 2008**



* Per 100,000 population.

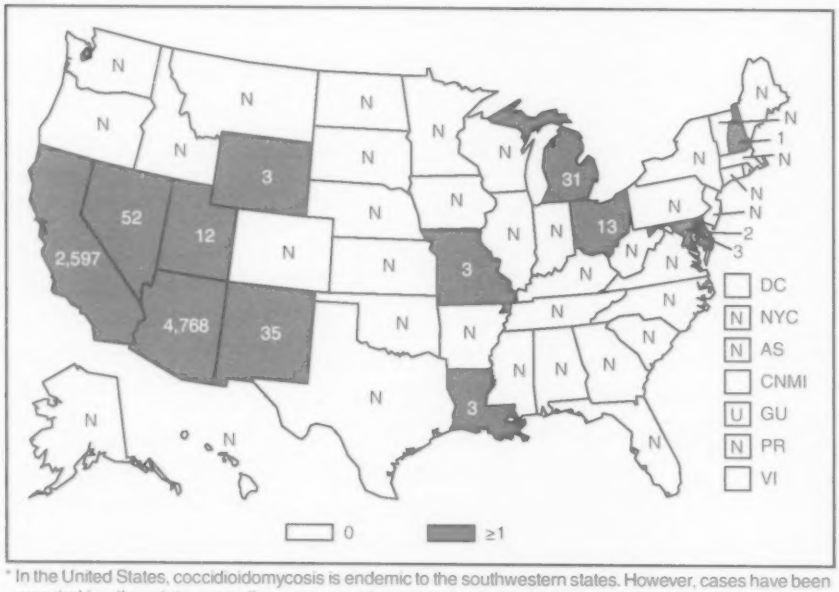
In 2008, the chlamydia rate among women in the United States and territories (Guam, Puerto Rico, and Virgin Islands) was 580.0 cases per 100,000 population.

CHOLERA. Number of reported cases — United States and U.S. territories, 2008



In 2008, a majority (80%) of cholera infections in the United States were acquired during travel abroad. Foreign travel and the consumption of contaminated domestic seafood remain important sources of cholera infection.

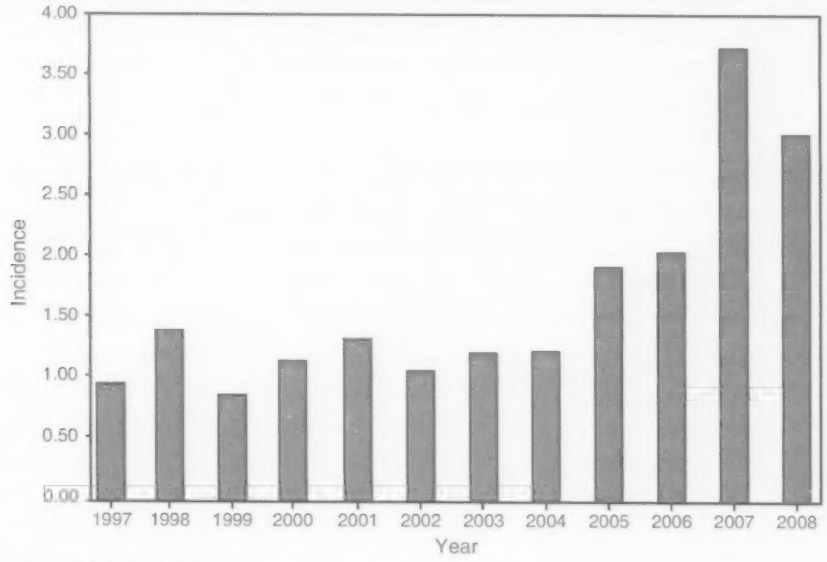
COCCIDIOIDOMYCOSIS. Number of reported cses — United States* and U.S. territories, 2008



* In the United States, coccidioidomycosis is endemic to the southwestern states. However, cases have been reported in other states, usually among travelers returning from areas in which the disease is endemic.

In 2008, the number of reported coccidioidomycosis cases in the United States decreased slightly, primarily because of fewer reports received from the disease-endemic states of California and, to a lesser extent, Arizona. Case counts decreased even after the case definition revision implemented by the Council of State and Territorial Epidemiologists in 2007 included less stringent diagnostic criteria.

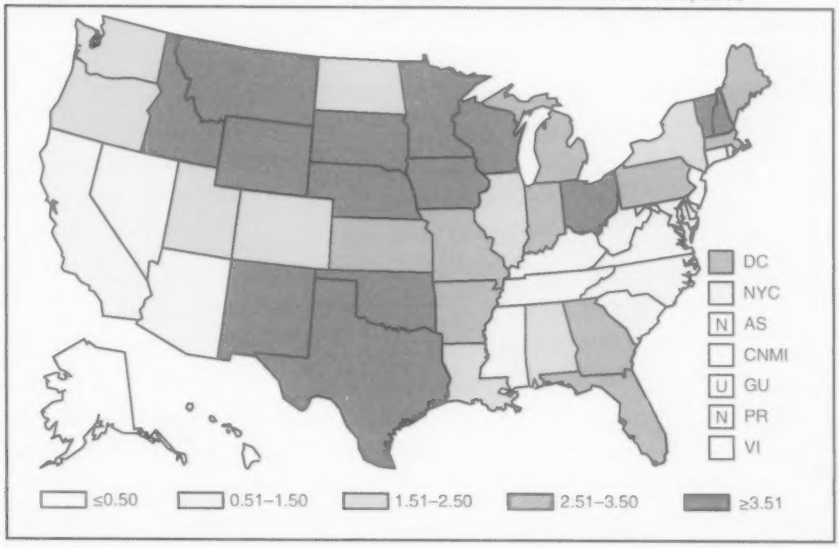
CRYPTOSPORIDIOSIS. Incidence,* by year — United States, 1997–2008



* Per 100,000 population.

Cryptosporidiosis incidence decreased slightly in 2008 after a >3 fold increase during 2004–2007. Whether the changes in cryptosporidiosis reporting reflect a real change in cryptosporidiosis incidence or reflect changing diagnosis, testing, and reporting patterns is unclear.

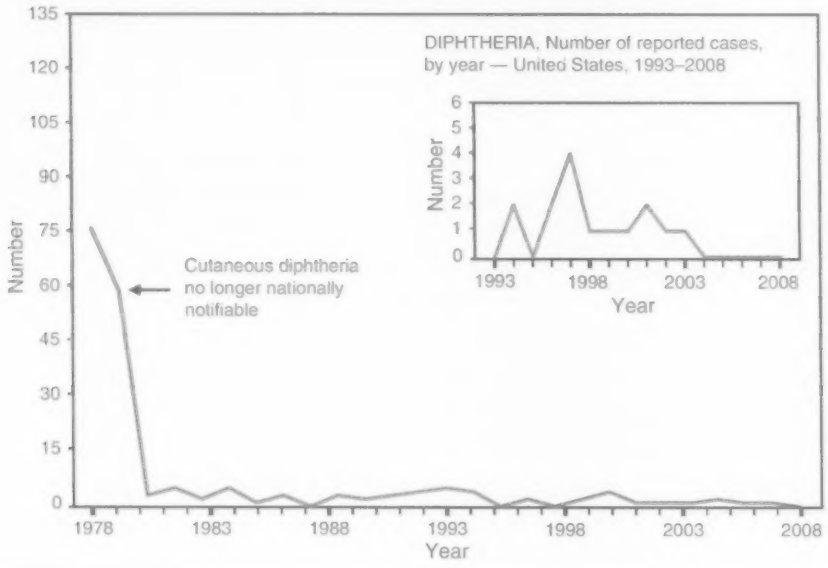
CRYPTOSPORIDIOSIS. Incidence* — United States and U.S. territories, 2008



* Per 100,000 population.

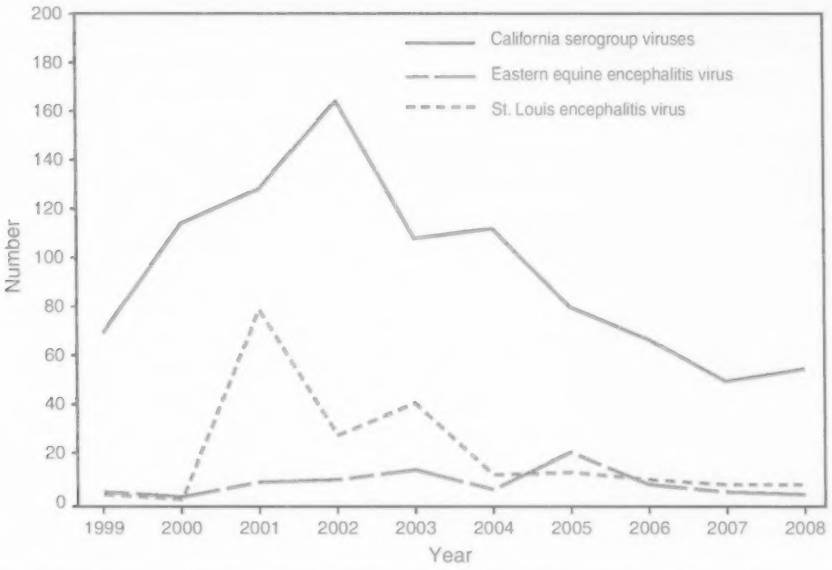
Cryptosporidiosis is widespread geographically in the United States. Differences in reported incidence among states might reflect differences in risk factors, increased cases associated with outbreaks, or difference in the capacity to detect and report cases. Cryptosporidiosis cases increase during summer, coinciding with increased use of recreational water.

DIPHTHERIA. Number of reported cases, by year — United States, 1978–2008



Since 2004, no case of respiratory diphtheria has been reported in the United States, and the national health objective of zero cases for 2010 has been maintained.

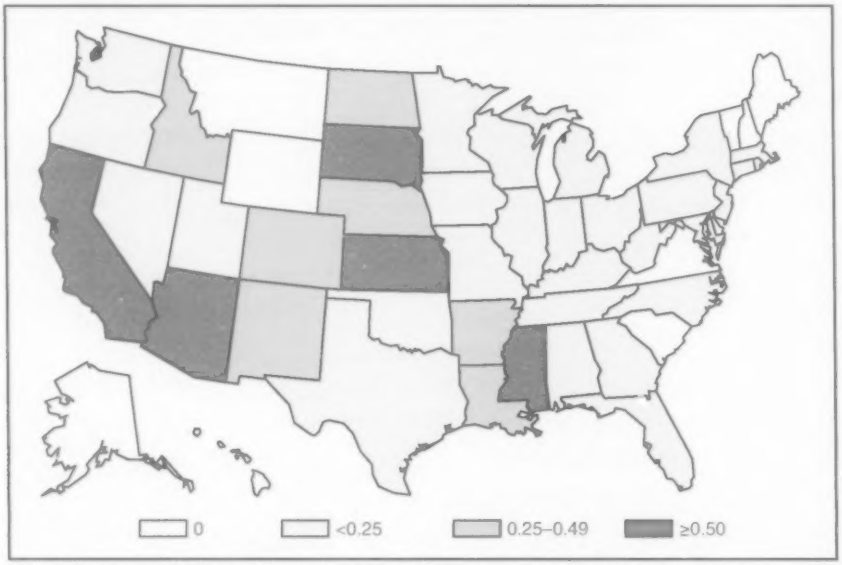
DOMESTIC ARBOVIRAL DISEASES. Number* of reported cases of neuroinvasive disease, by year — United States, 1999–2008



* Data from the Division of Vector-Borne Diseases, National Center for Emerging and Zoonotic Infectious Diseases (ArboNET Surveillance). Only reported cases of neuroinvasive disease are shown.

Arthropod-borne viruses (arboviruses) are primarily transmitted during the summer and fall in the United States, with the incidence of human disease peaking in the late summer. The most common arboviruses affecting humans in the United States are West Nile virus (WNV), La Crosse virus (LACV), Eastern equine encephalitis virus (EEEV), and St. Louis encephalitis virus (SLEV). LACV is the most common California (CAL) serogroup virus in the United States. LACV causes neuroinvasive disease primarily among children. In 2008, CAL serogroup virus neuroinvasive disease cases were reported from 12 states (Georgia, Kentucky, Louisiana, Minnesota, Mississippi, New York, North Carolina, Ohio, Tennessee, Virginia, West Virginia, and Wisconsin). During 1999–2008, a median of 93 (range: 50–167) cases per year were reported in the United States. EEEV disease in humans is associated with high mortality rates (>20%) and severe neurologic sequelae. In 2008, EEEV neuroinvasive disease cases were reported from four states (Alabama, Florida, Massachusetts, and North Carolina). During 1999–2008, a median of seven (range: 3–21) cases per year were reported in the United States. Before the introduction of WNV to the United States, SLEV was the nation's leading cause of epidemic viral encephalitis. In 2008, SLEV neuroinvasive disease cases were reported from three states (Arkansas, Louisiana, and North Carolina). During 1999–2008, a median of eight (range: 2–79) cases per year were reported in the United States.

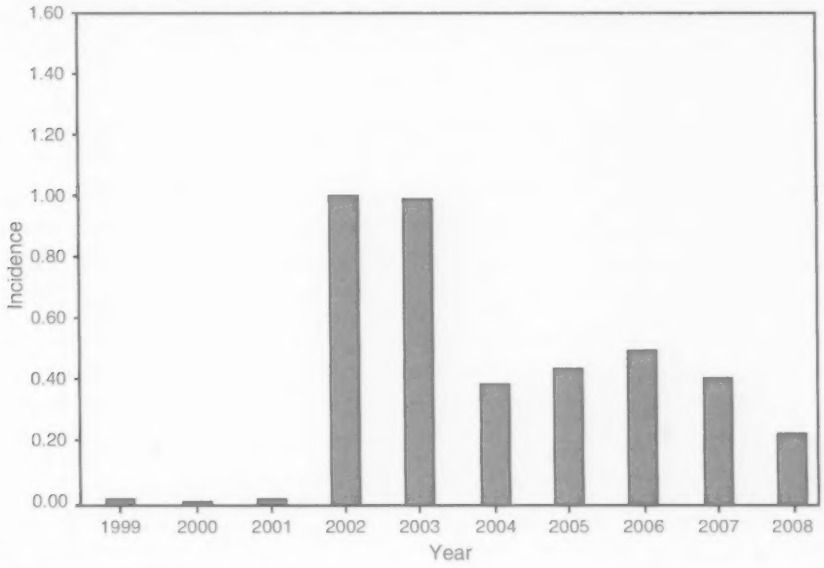
DOMESTIC ARBOVIRAL DISEASES, WEST NILE. Incidence* of reported cases of neuroinvasive disease, by state — United States, 2008



* Per 100,000 population. Data from the Division of Vector-Borne Diseases, National Center for Emerging and Zoonotic Infectious Diseases (ArboNET Surveillance).

In 2008, the states with the greatest reported incidence of West Nile virus neuroinvasive disease (WNND) were South Dakota (1.4 per 100,000 population), Arizona (1.0), California (0.8), Mississippi (0.8), and Kansas (0.5). The five states with the greatest number of reported cases were California (292), Arizona (62), Texas (40), New York (32), and Mississippi (22). California reported 42% of all WNND cases in 2008.

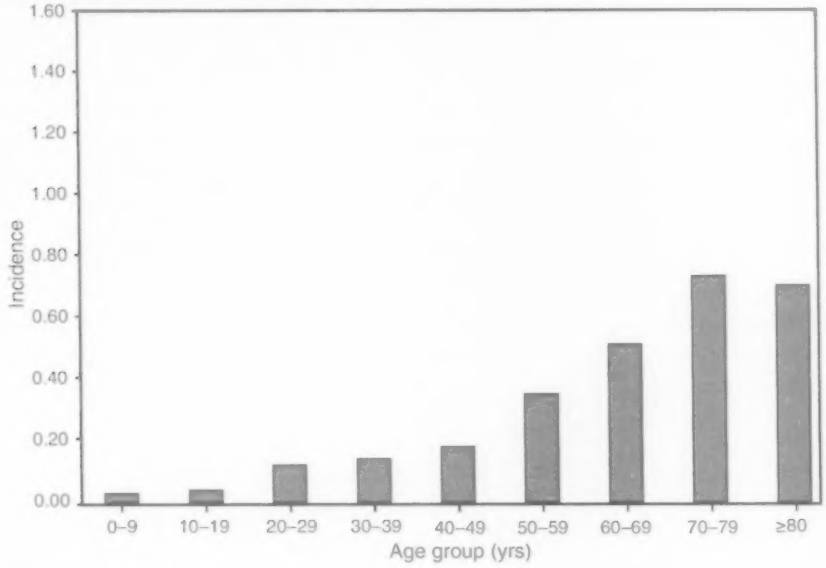
DOMESTIC ARBOVIRAL DISEASES, WEST NILE. Incidence* of reported cases of neuroinvasive disease, by year — United States, 1999–2008



* Per 100,000 population.

West Nile virus (WNV) was first detected in the United States in 1999. Despite substantial geographic spread of the virus from 1999 through 2001, WNV neuroinvasive disease (WNND) incidence remained low until 2002, when large outbreaks occurred in the Midwest and Great Plains. The national incidence of WNND peaked in 2002 and 2003 and was relatively stable from 2004 through 2007. In 2008, the reported incidence of WNND in the United States was 0.23 per 100,000 population. Although WNND did not become nationally notifiable until 2002, WNND cases have been consistently reported to ArboNET since 2000.

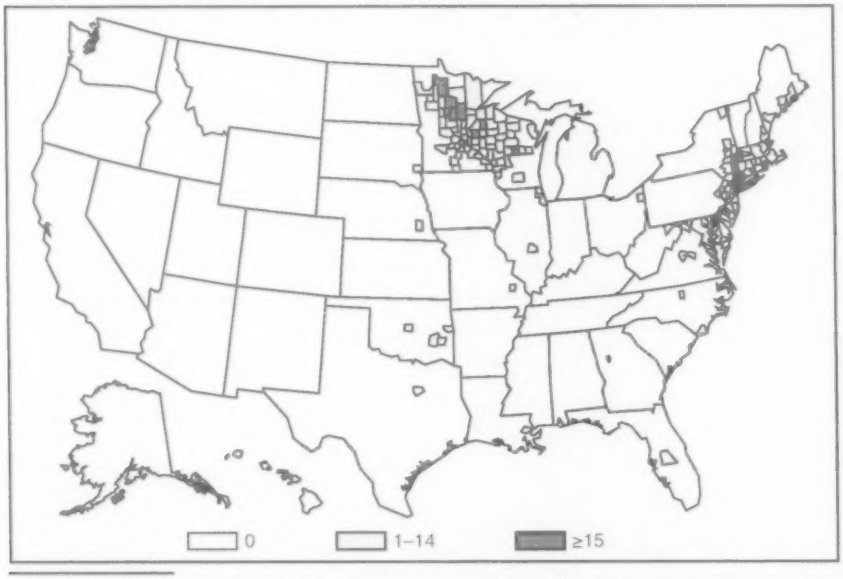
DOMESTIC ARBOVIRAL DISEASES, WEST NILE. Incidence* of reported cases of neuroinvasive disease, by age group — United States, 2008



* Per 100,000 population.

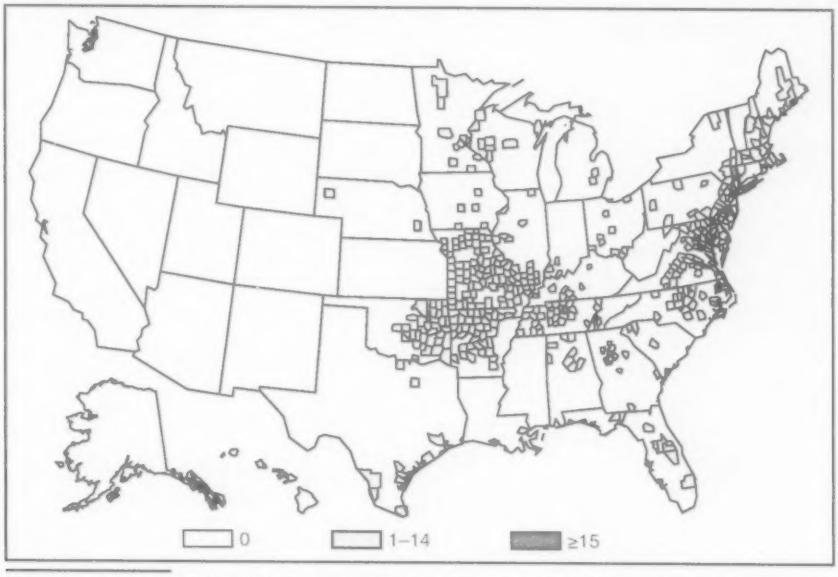
In 2008, the median age of patients with West Nile virus neuroinvasive disease was 58 years (range: 1– 92 years), with increasing incidence among older age groups.

EHRLICHIOSIS, *ANAPLASMA PHAGOCYTOPHILUM*. Number of reported cases, by county — United States, 2008



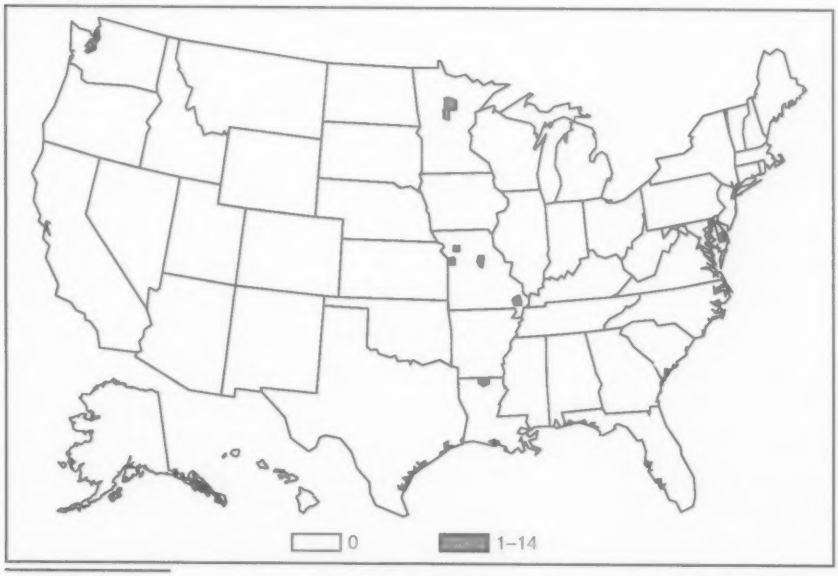
Anaplasmosis is caused by infection with *Anaplasma phagocytophilum*. Cases are reported primarily from the upper Midwest and coastal New England, reflecting both the range of the primary tick vector species (*Ixodes scapularis*) and the range of preferred animal hosts for tick feeding.

EHRLICHIOSIS, *EHRLICHIA CHAFFEENSIS* Number of reported cases, by county — United States, 2008



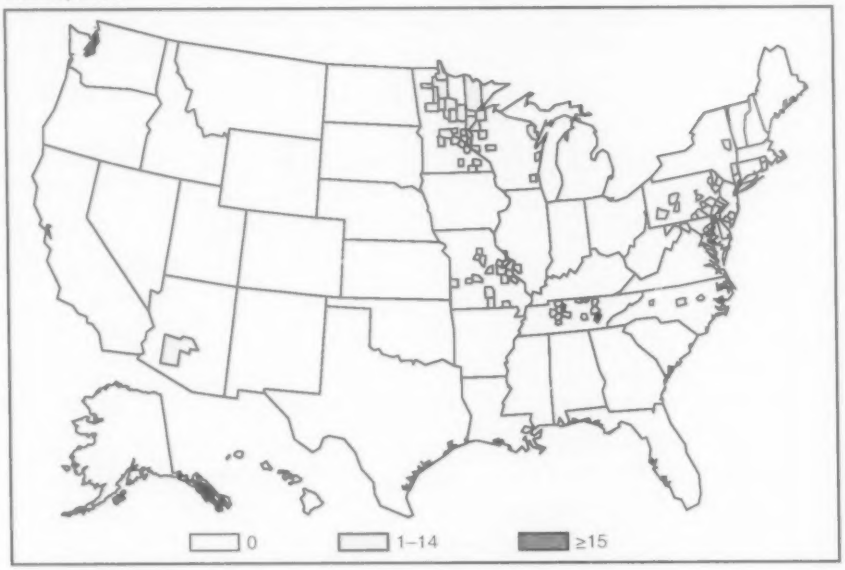
The most common type of Ehrlichiosis results from infection with *Ehrlichia chaffeensis*. Cases are reported primarily in the lower Midwest, Southeast, and East Coast, reflecting the range of the primary tick vector species (*Amblyomma americanum*).

EHRLICHIOSIS, *EHRLICHIA EWINGII*. Number of reported cases, by county — United States, 2008



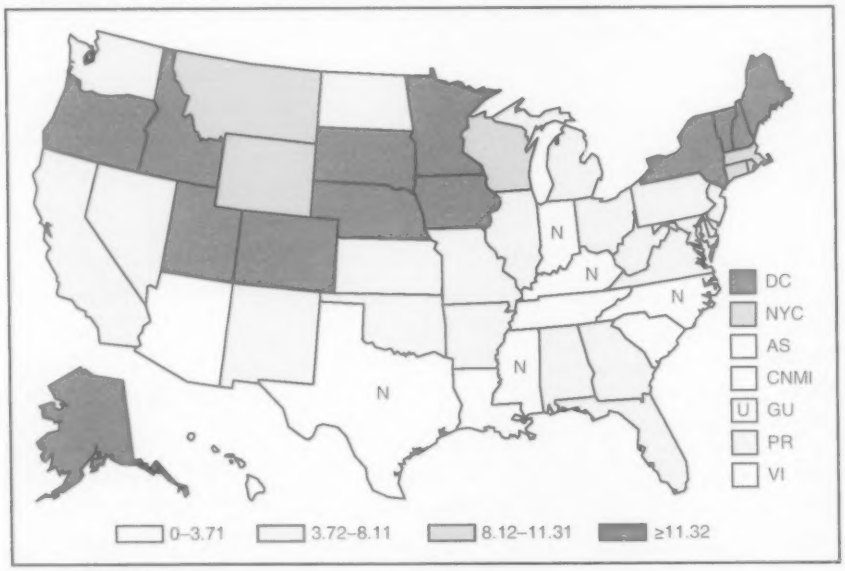
Cases of ehrlichiosis caused by *Ehrlichia ewingii* remain rare and are reported primarily from the central United States.

EHRLICHIOSIS, UNDETERMINED. Number of reported cases, by county — United States, 2008



Cases of ehrlichiosis and anaplasmosis caused by undetermined species, or more commonly, cases for which the geographically expected species is not clearly differentiated by serologic testing, are reflected in this reporting category. Because *Ehrlichia* and *Anaplasma* infections might elicit cross-reactive antibody responses, some states also might use this category to report cases for which single, inappropriate diagnostic tests were run (e.g., physicians ordering only ehrlichiosis tests in a region where anaplasmosis is expected to predominate).

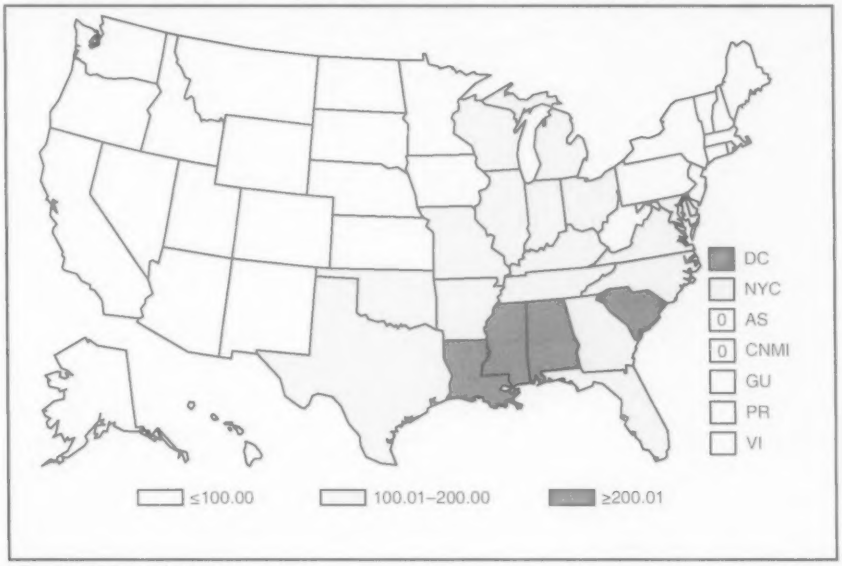
GIARDIASIS. Incidence* — United States and U.S. territories, 2008



* Per 100,000 population.

Giardiasis is widespread geographically in the United States, with consistent increased reporting in certain states and regions. Whether this difference is of true biologic significance or reflects differences in giardiasis case detection and reporting among states is uncertain.

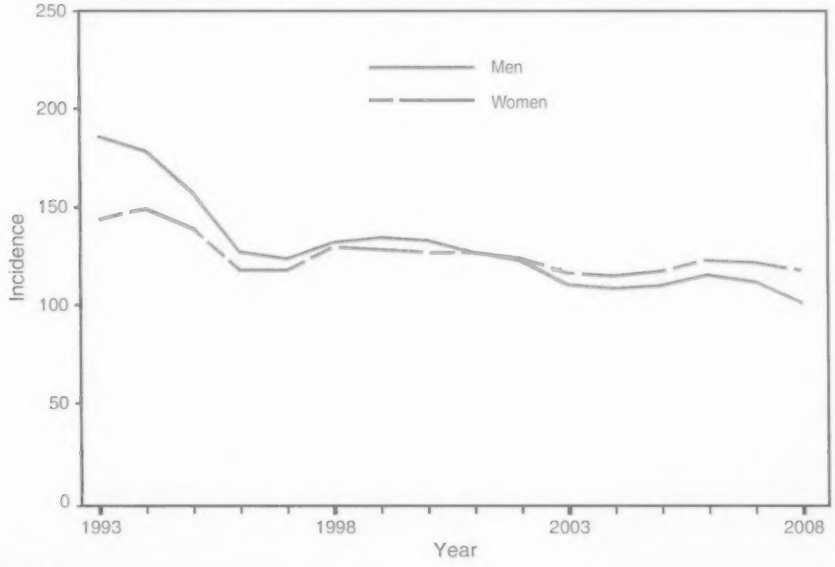
GONORRHEA. Incidence* — United States and U.S. territories, 2008



* Per 100,000 population.

In 2008, the gonorrhea rate in the United States and territories (Guam, Puerto Rico, and Virgin Islands) was 110.3 cases per 100,000 population, a decrease from the rate in 2007.

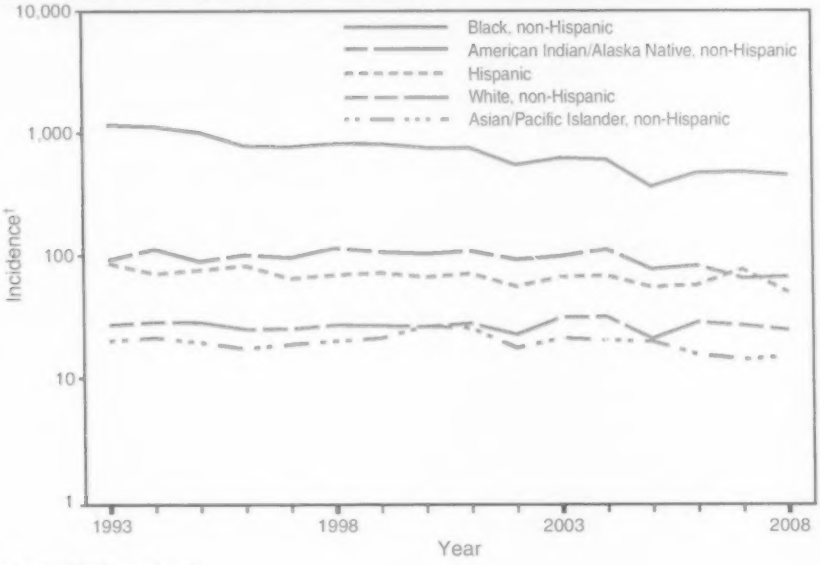
GONORRHEA. Incidence,* by sex — United States, 1993–2008



* Per 100,000 population.

After a 74% decline in the rate of reported gonorrhea from 1975 through 1997, overall gonorrhea rates plateaued. For the eighth year in a row, the gonorrhea rate among women in 2008 was slightly higher than the rate among men.

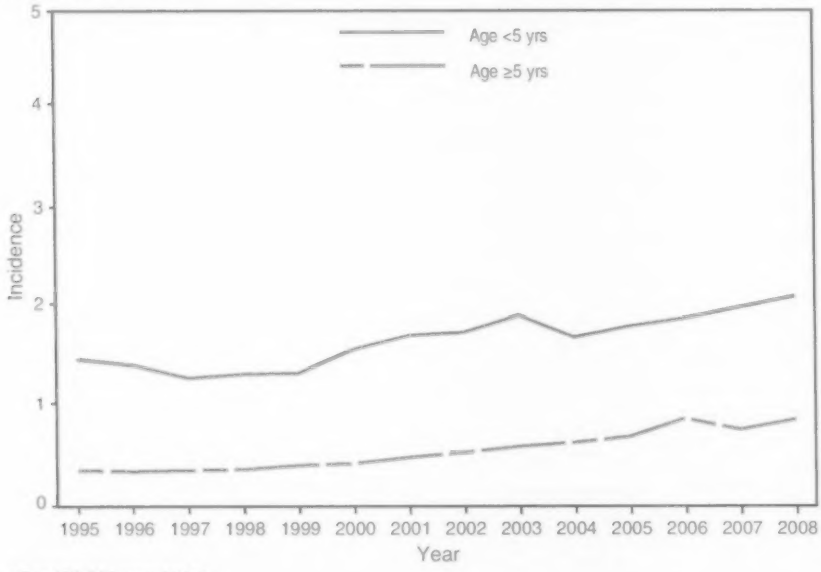
GONORRHEA. Incidence,* by race/ethnicity — United States, 1993–2008



* Per 100,000 population.
† Y-axis is log scale.

Gonorrhea incidence among blacks decreased considerably during the 1990s but continues to be the highest among all races/ethnicities. In 2008, incidence among non-Hispanic blacks was approximately 20 times greater than that for non-Hispanic whites.

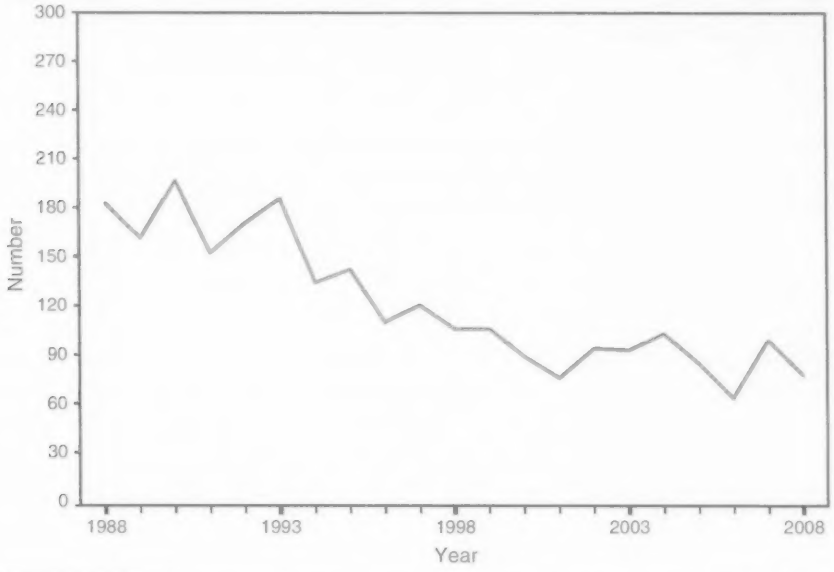
***HAEMOPHILUS INFLUENZAE*, INVASIVE DISEASE. Incidence,* by age group — United States, 1995–2008**



* Per 100,000 population.

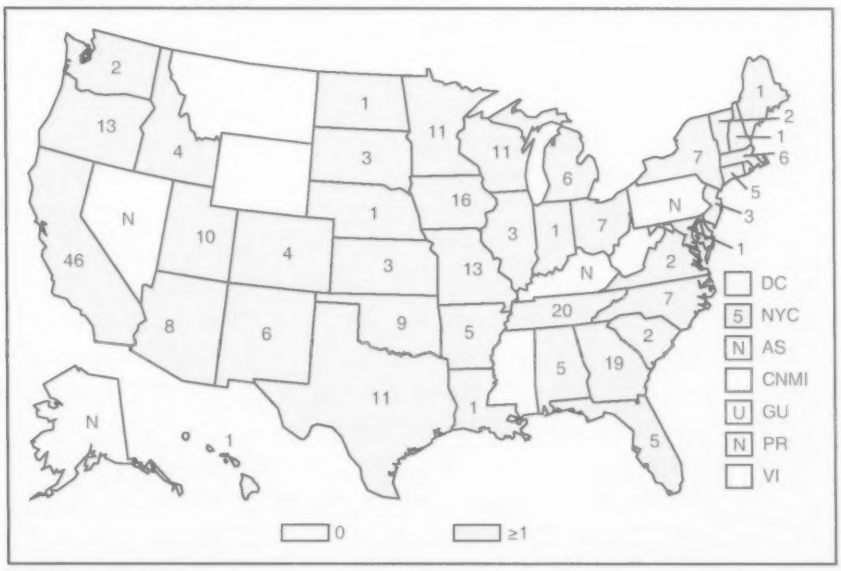
Substantial reductions in the incidence of *Haemophilus influenzae* serotype b (Hib) disease have been achieved through universal Hib vaccination. Before the introduction of conjugate vaccines in 1987, the incidence of invasive Hib disease among children aged <5 years was estimated to be 100 cases per 100,000 population. To monitor the epidemiology of Hib invasive disease and to detect the emergence of invasive non-Hib, serotyping of all *Haemophilus influenzae* isolates in children aged <5 years and thorough and timely investigation of all cases of Hib disease are essential.

HANSEN DISEASE (LEPROSY). Number of reported cases, by year — United States, 1988–2008



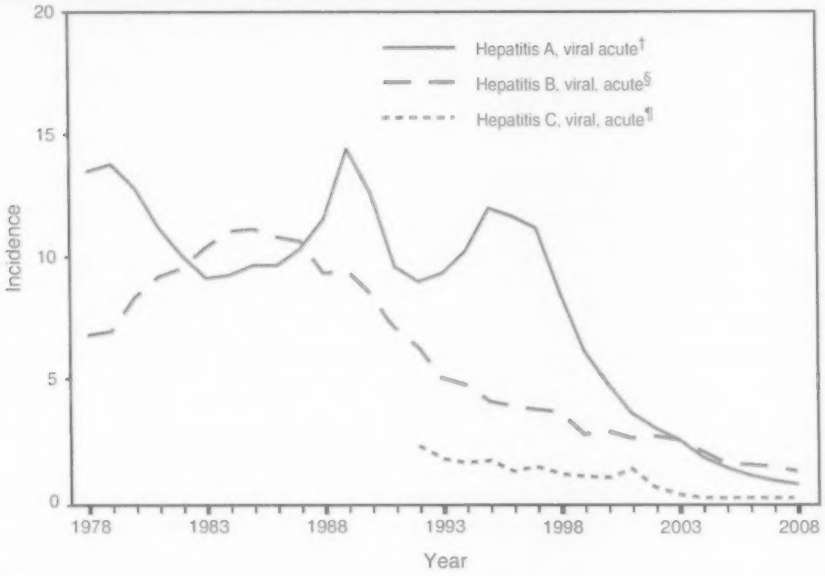
The number of cases of Hansen disease reported to CDC gradually declined during 1988–2008. This decline is primarily the result of decreasing numbers of imported cases.

HEMOLYTIC UREMIC SYNDROME, POSTDIARRHEAL. Number of reported cases — United States and U.S. territories, 2008



During 2008, as usual, most reported cases occurred among children aged 1–4 years. Hemolytic uremic syndrome has been a nationally notifiable disease since 1995. In 2008, cases continued to be reported from all regions of the country. Reporting is likely not complete; this is corroborated by data from Foodborne Disease Active Surveillance Network (FoodNet) sites indicating that additional cases can be detected by review of hospital discharge data.

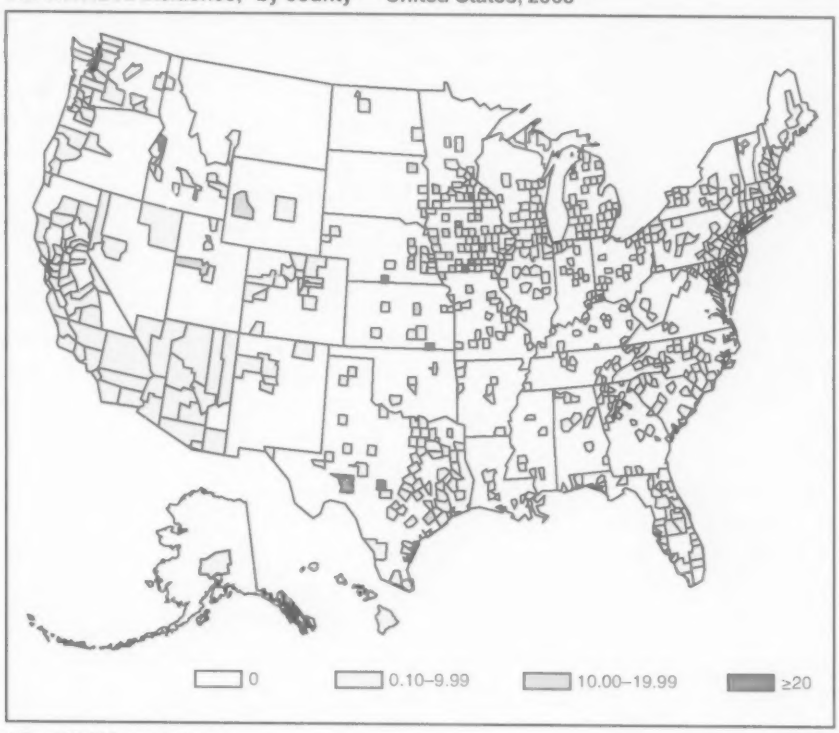
HEPATITIS, VIRAL. Incidence,* by year — United States, 1978–2008



* Per 100,000 population.
† Hepatitis A vaccine was first licensed in 1995.
§ Hepatitis B vaccine was first licensed in June 1982.
¶ An anti-hepatitis C virus (HCV) antibody test first became available in May 1990.

Hepatitis A incidence continues to decline and in 2008 was the lowest ever recorded. This reduction in incidence is attributable, in part, to routine vaccination of children. Hepatitis A incidence has declined >90% since the last nationwide outbreak in 1995. Routine hepatitis B vaccination of infants has reduced rates >95% in children. Rates also have declined among adults, but a substantial proportion of cases continue to occur among adults with high-risk behaviors. Incidence of acute hepatitis C has declined approximately 90% since 1992; however, a substantial burden of disease as a result of chronic HCV infection remains.

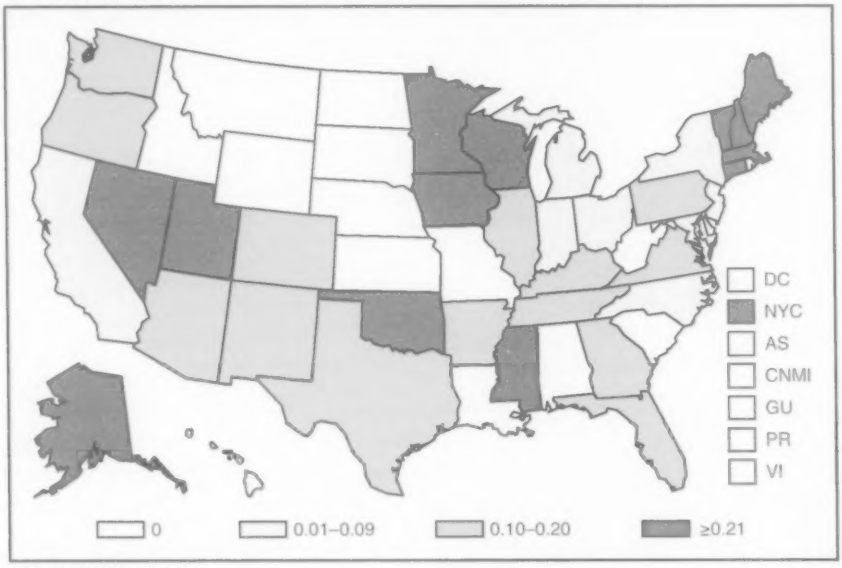
HEPATITIS A. Incidence,* by county — United States, 2008



* Per 100,000 population.

In 1999, routine hepatitis A vaccination was recommended for children living in 11 states with consistently elevated rates of disease. Since then, rates of infection with hepatitis A virus (HAV) have declined in all regions, with the greatest decline occurring in western states. HAV infection rates are now the lowest ever reported and similar in all regions. As of 2006, hepatitis A vaccine is now recommended for children in all states.

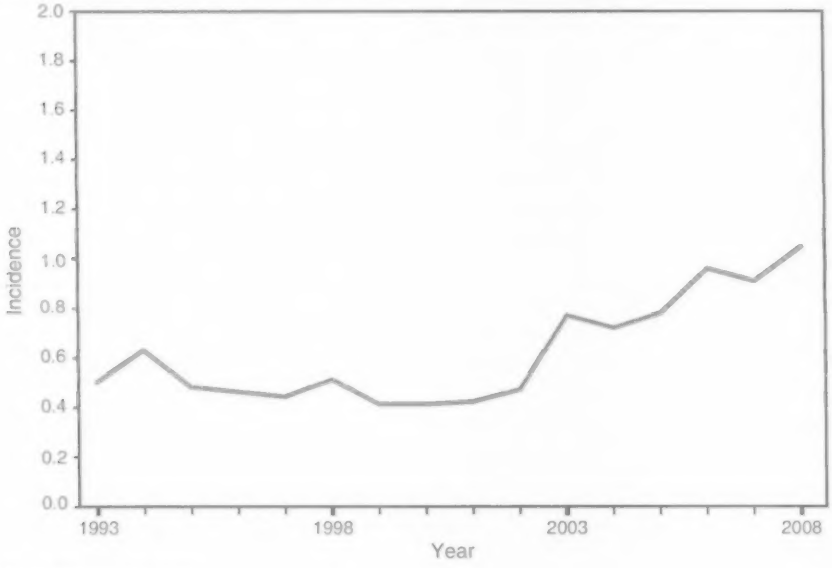
INFLUENZA-ASSOCIATED PEDIATRIC MORTALITY. Incidence* — United States and U.S. territories, 2008



* Per 100,000 population.

During 2008, 34 states and New York City reported a total of 90 influenza-associated pediatric deaths to CDC for an overall incidence rate in the United States of 0.12 deaths per 100,000 children aged <18 years. This is similar to rates estimated through mathematical modeling. State-to-state variation in rates likely reflected the rarity of the event and small population size rather than true differences in disease burden.

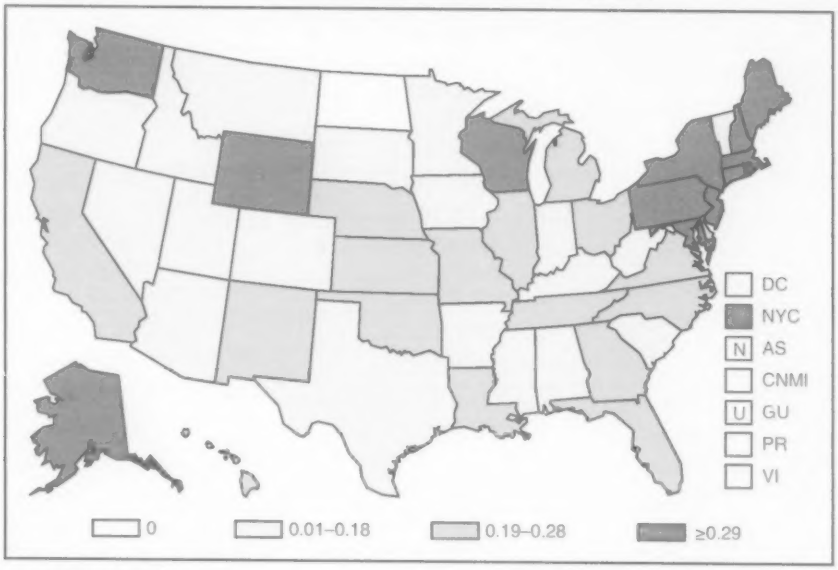
LEGIONELLOSIS. Incidence,* by year — United States, 1993–2008



* Per 100,000 population.

Legionellosis incidence increased again in 2008, a trend that has been observed since 2003. Factors contributing to this increase might include a true increase in disease transmission, greater use of diagnostic testing, and increased reporting.

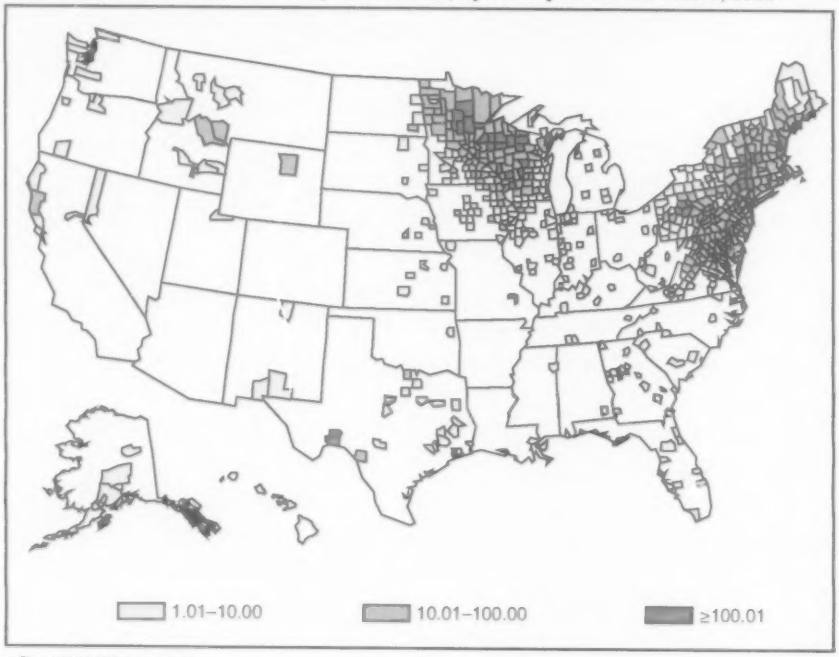
LISTERIOSIS. Incidence* — United States and U.S. territories, 2008



* Per 100,000 population.

Listeriosis is primarily foodborne and occurs most frequently among persons who are older, pregnant, or immunocompromised. Although the infection is relatively uncommon, listeriosis is a leading cause of death attributable to foodborne illness in the United States. Recent outbreaks have been linked to sprouts and Mexican-style cheese.

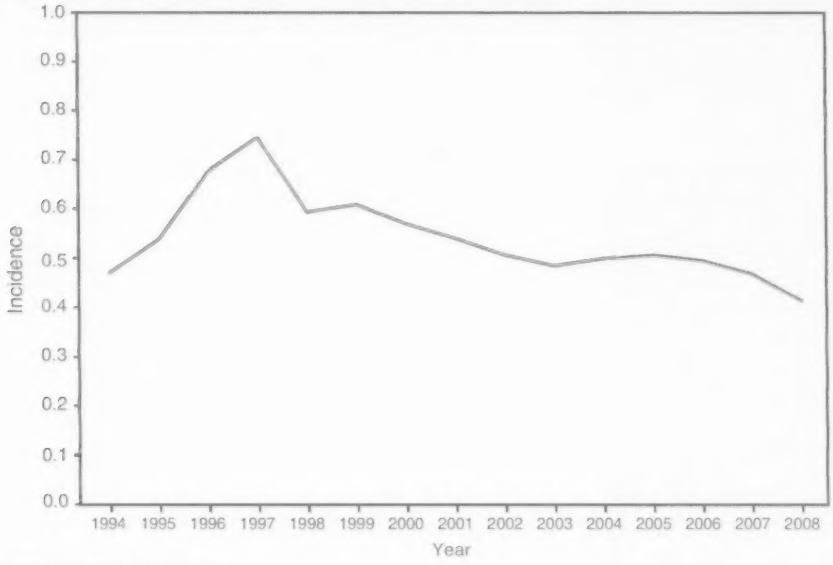
LYME DISEASE. Incidence* of reported cases, by county — United States, 2008



* Per 100,000 population.

Approximately 90% of Lyme disease cases are reported from the northeastern and upper midwestern United States. A rash that can be confused with early Lyme disease sometimes occurs following bites of the lone star tick (*Amblyomma americanum*). These ticks, which do not transmit the Lyme disease bacterium, are common human-biting ticks in southern and southeastern United States.

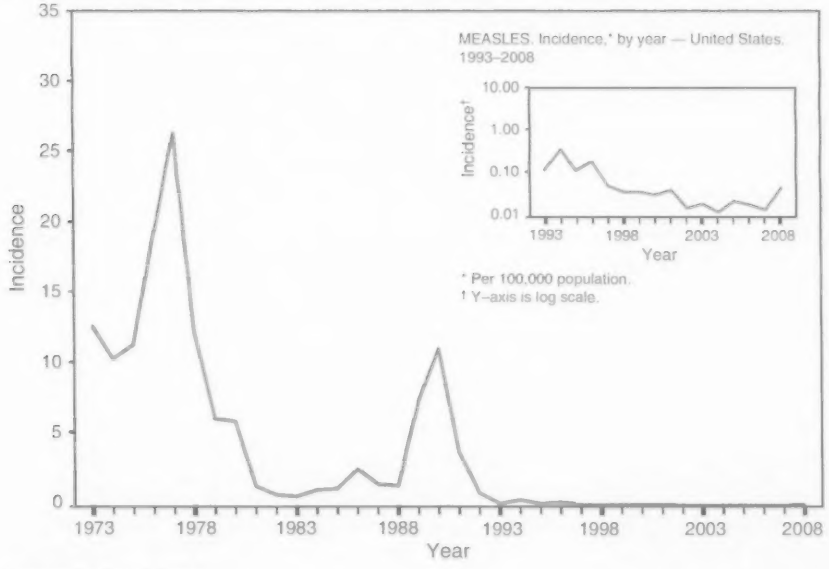
MALARIA. Incidence,* by year — United States, 1994–2008



* Per 100,000 population.

Following a steady rate from 2005 to 2007, the number of reported malaria cases decreased by almost 11% from 2007 to 2008, which is reflected in the decreasing incidence.

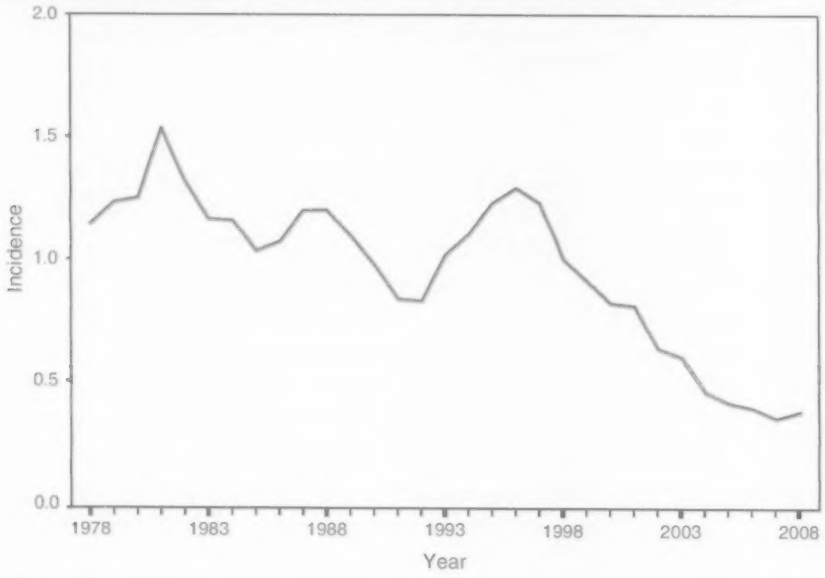
MEASLES. Incidence,* by year — United States, 1973–2008



* Per 100,000 population.

Measles vaccine was licensed in 1963. Evidence suggests that measles is no longer endemic in the United States.

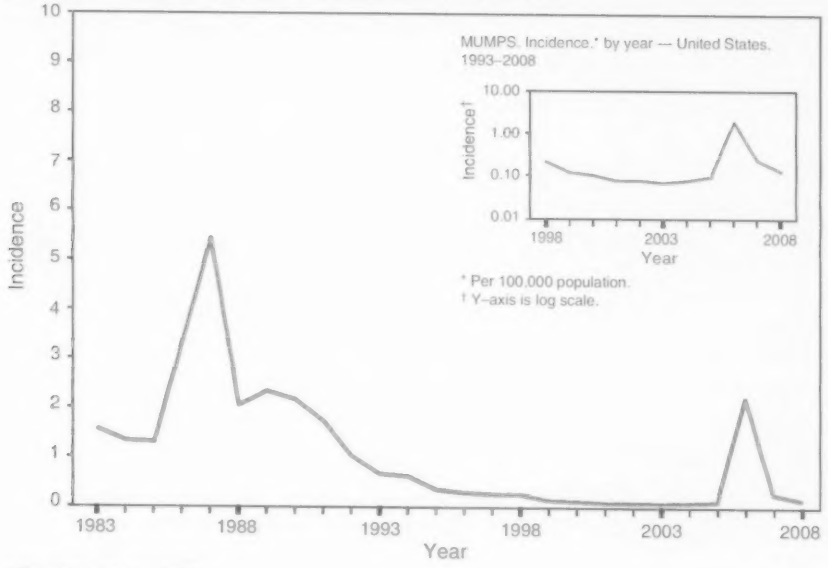
MENINGOCOCCAL DISEASE. Incidence,* by year — United States, 1978–2008



* Per 100,000 population.

Meningococcal disease incidence is at a historic low but continues to cause substantial morbidity and mortality in the United States. The highest incidence of meningococcal disease occurs among infants, with a second peak occurring in late adolescence. In 2005, a quadrivalent (A, C, Y, W-135) meningococcal conjugate vaccine was licensed and recommended for adolescents and others at increased risk for disease. In 2008, coverage with meningococcal conjugate vaccine was 41.8% among adolescents aged 13–17 years in the United States.

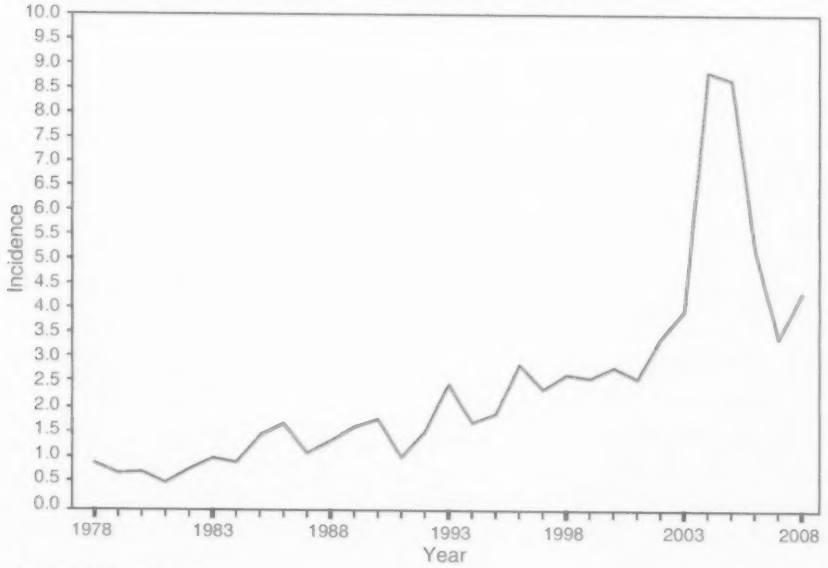
MUMPS. Incidence,* by year — United states, 1983–2008



* Per 100,000 population.

Mumps vaccine was licensed in 1967. The widespread use of a second dose of mumps vaccine in 1990 was followed by historically low morbidity until 2006, when the United States experienced the largest mumps outbreak in two decades. The 2006 outbreak of more than 6,000 cases affected primarily college students aged 18–24 years in the Midwest. As a result, the Advisory Committee on Immunization Practices updated its vaccination recommendations, and the Council of State and Territorial Epidemiologists updated its case definition.

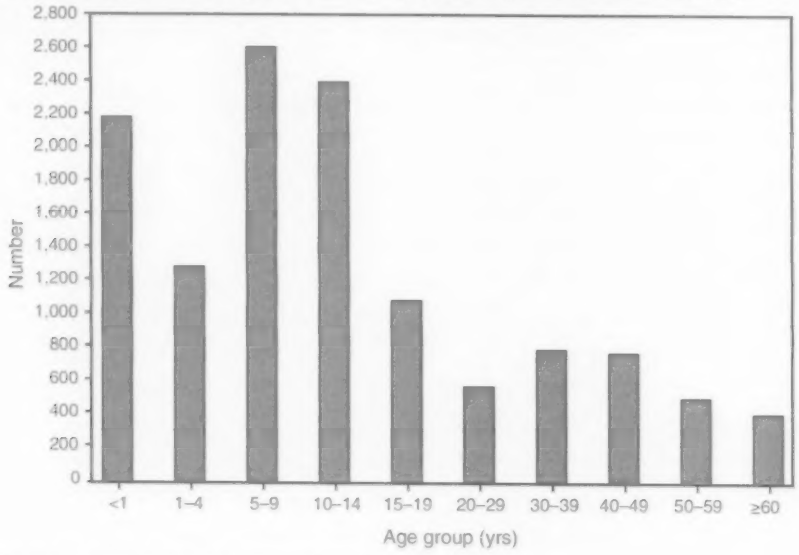
PERTUSSIS. Incidence,* by year — United States, 1978–2008



* Per 100,000 population.

Although the incidence of reported pertussis is substantially lower than the peak in 2004, incidence increased slightly during 2007–2008, and continues to remain higher than in the 1990s.

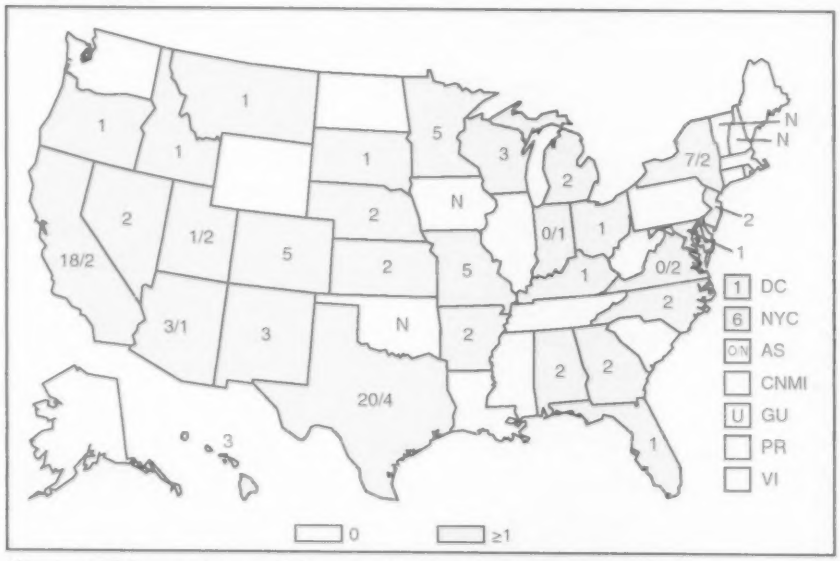
PERTUSSIS. Number of reported cases,* by age group — United States, 2008



* Of 13,278 cases, age was reported unknown for 671 persons.

Infants, especially those who are undervaccinated, are at increased risk for complicated infections and death from pertussis. Immunity to pertussis is thought to wane approximately 5–10 years after completion of childhood vaccination. A second peak in the number of reported cases is observed among school-aged children and adolescents. The contribution of cases in children aged 5–9 years appears to be increasing compared with previous years.

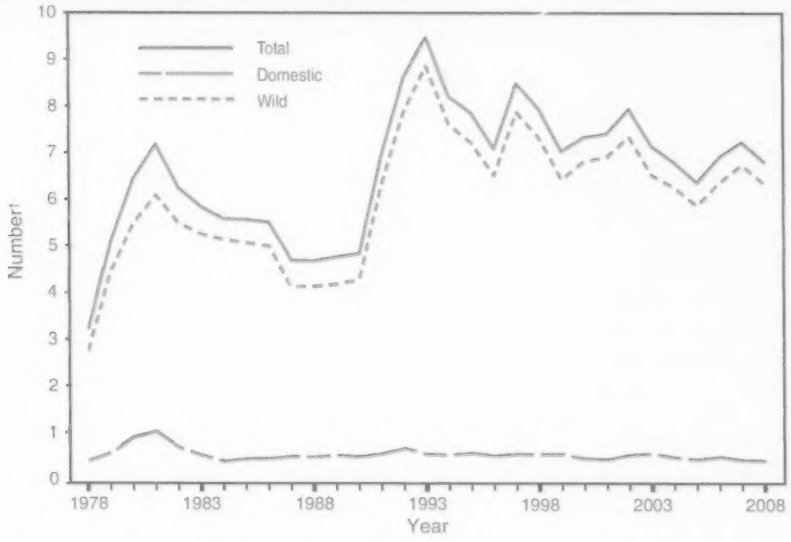
Q FEVER, ACUTE AND CHRONIC. Number of reported cases — United States and U.S. territories, 2008



* Number of Q fever acute cases/Q fever chronic cases. Numbers displayed with no forward slash are Q fever acute cases.

Q fever, caused by *Coxiella burnetii*, is reported throughout the United States. Human cases occur as a result of human interaction with livestock, especially sheep, goats, and cattle. Although relatively few human cases are reported annually, the disease is believed to be substantially underreported because of its nonspecific presentation and the subsequent failure to suspect infection and request appropriate diagnostic tests.

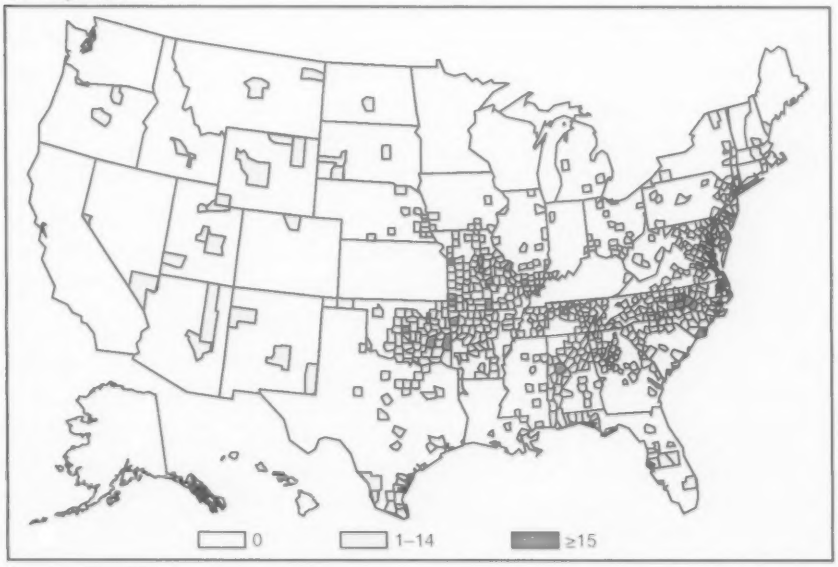
RABIES, ANIMAL. Number of reported cases among wild and domestic animals,* by year — United States and Puerto Rico, 1978–2008



* Data from the National Center for Emerging and Zoonotic Infectious Diseases.
† In thousands.

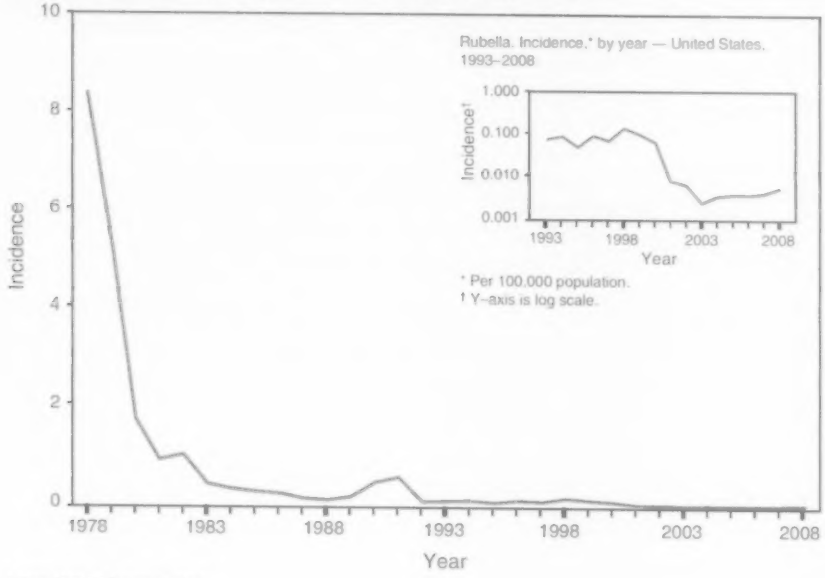
Reported periods of resurgence and decline of rabies cases result primarily from cyclic reemergence. However, the proportion of rabid animals among those tested has demonstrated an overall negative trend from 6.1% rabid in 2006 to 5.6% rabid in 2008. Despite increases in diagnostic testing and the subsequent increase in reported number of rabid bats, the raccoon rabies virus variant continues to be responsible for more than 75% of all terrestrial rabies cases reported in the United States.

ROCKY MOUNTAIN SPOTTED FEVER. Number of reported cases, by county — United States, 2008



Rocky Mountain spotted fever, caused by *Rickettsia rickettsii*, is reported throughout much of the United States, reflecting the widespread ranges of the primary tick vectors responsible for transmission (primarily *Dermacentor variabilis* in the East and *Dermacentor andersonii* in the West, but also *Rhipicephalus sanguineus* in some newly recognized focal areas).

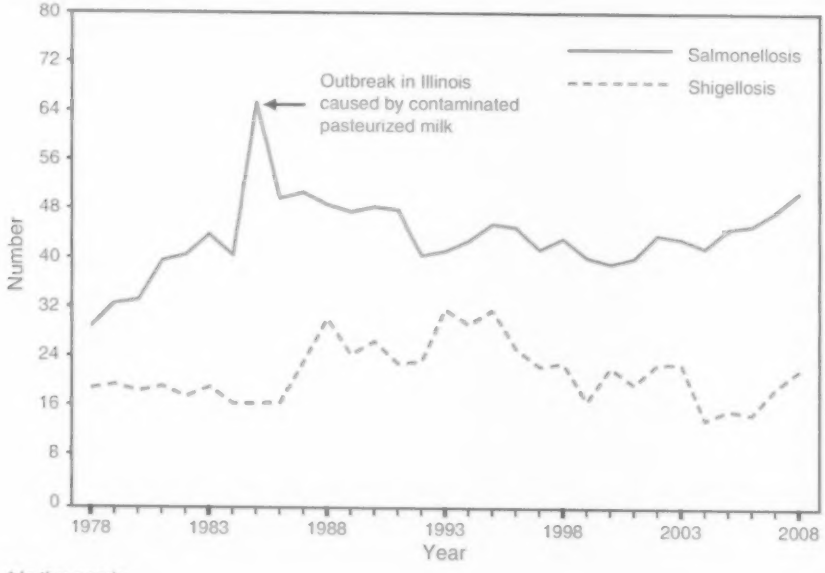
RUBELLA. Incidence,* by year — United States, 1978–2008



* Per 100,000 population.

Rubella vaccine was licensed in 1969. Evidence suggests that rubella is no longer endemic in the United States.

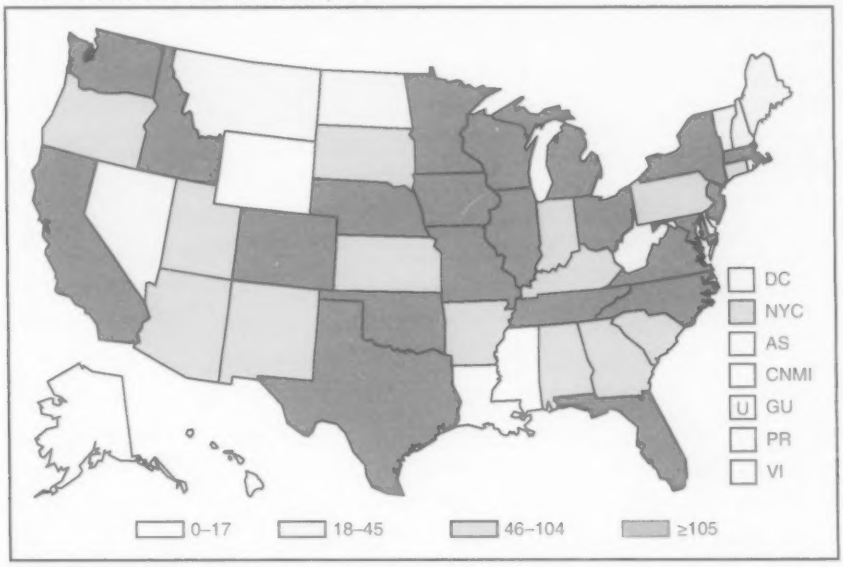
SALMONELLOSIS AND SHIGELLOSIS. Number* of reported cases, by year — United States, 1978–2008



* In thousands.

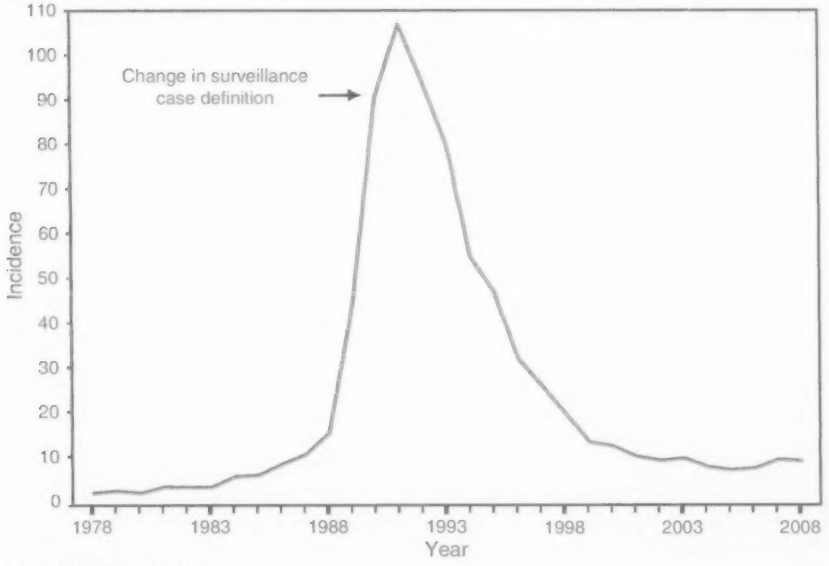
Rates of salmonellosis have remained relatively stable during the past two decades. Typhimurium, Enteritidis, and Newport are the most commonly reported *Salmonella* serotypes.

SHIGA TOXIN-PRODUCING *ESCHERICHIA COLI* (STEC). Number of reported cases — United States and U.S. territories, 2008



Escherichia coli O157:H7 is the serotype of Shiga toxin-producing *E. coli* (STEC) isolated most commonly from ill persons. Other serotypes of *E. coli* also produce shiga toxin and can cause diarrhea and hemolytic uremic syndrome. *E. coli* O157:H7 has been nationally notifiable since 1994. National surveillance for all STEC, under the name enterohemorrhagic *E. coli* (EHEC), began in 2001. In 2008, cases continued to be reported from all regions of the country.

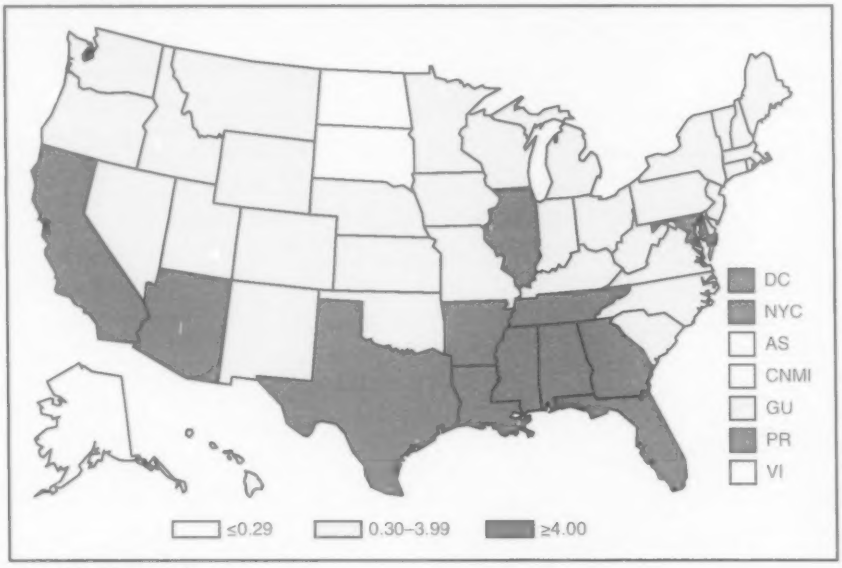
SYPHILIS, CONGENITAL. Incidence* among infants aged <1 year — United States, 1978–2008



* Per 100,000 live births.

Following a decline in the incidence of congenital syphilis since 1991, overall congenital syphilis rates remained the same from 2007 to 2008, 10.1 cases per 100,000 live births.

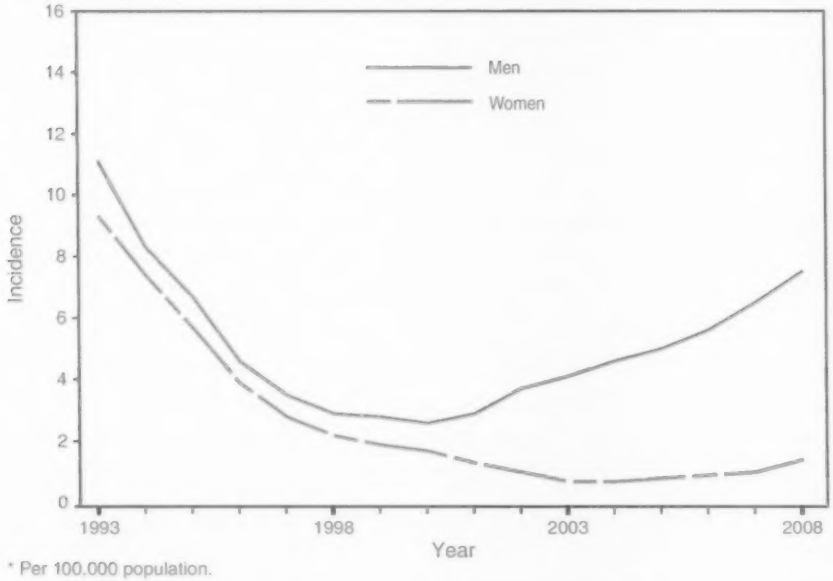
SYPHILIS, PRIMARY AND SECONDARY. Incidence* — United States and U.S. territories, 2008



* Per 100,000 population.

In 2008, the primary and secondary syphilis rate in the United States and territories (Guam, Puerto Rico, and Virgin Islands) was 4.5 cases per 100,000 population.

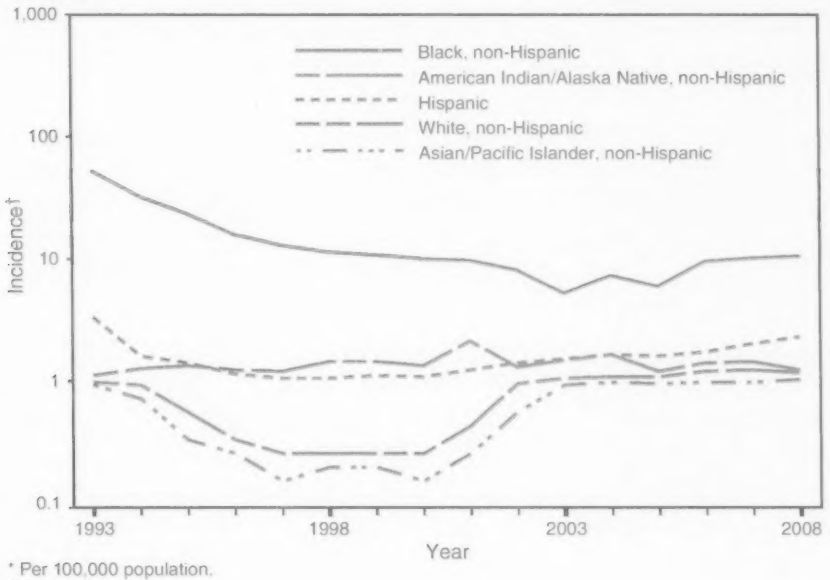
SYPHILIS, PRIMARY AND SECONDARY. Incidence*, by sex — United States, 1993–2008



* Per 100,000 population.

During 2007–2008, the incidence of primary and secondary syphilis in the United States increased from 3.8 to 4.5 cases (women: from 1.1 to 1.5; men: from 6.6 to 7.6) per 100,000 population.

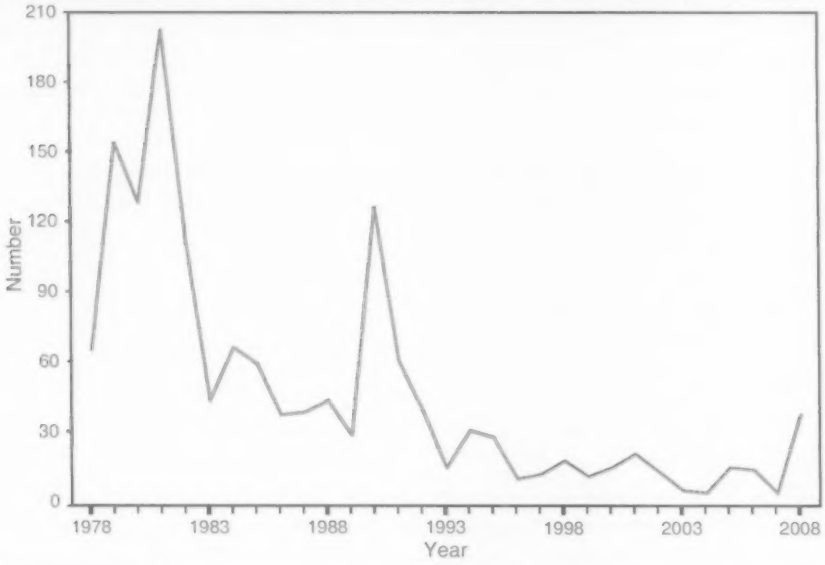
SYPHILIS, PRIMARY AND SECONDARY. Incidence,* by race/ethnicity — United States, 1993–2008



* Per 100,000 population.
† Y-axis is log scale.

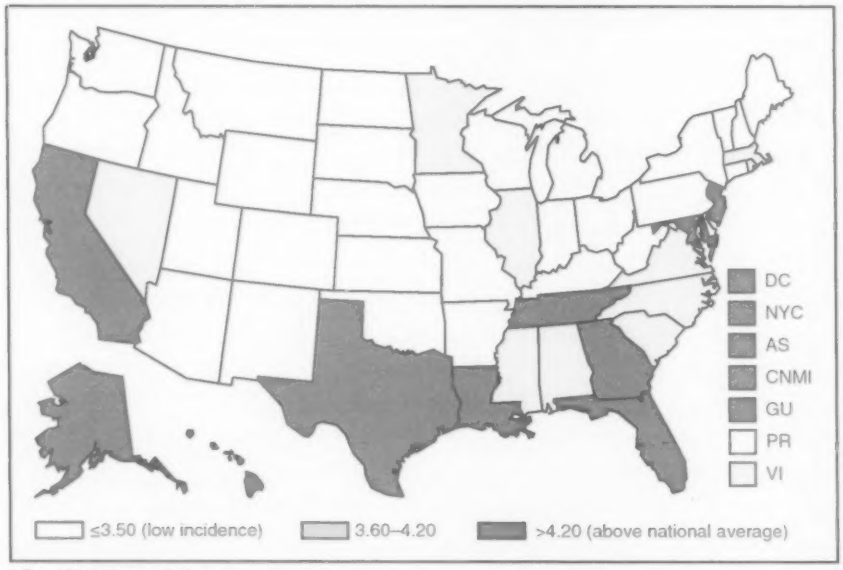
During 2007–2008, incidence of primary and secondary syphilis increased among all races/ethnicities except American Indian/Alaska Natives. Incidence per 100,000 population increased from 13.8 to 17.3 among non-Hispanic blacks; from 4.2 to 4.7 among Hispanics; from 1.2 to 1.5 among Asian/Pacific Islanders; from 2.0 to 2.2 among non-Hispanic whites; and decreased from 3.4 to 2.3 among American Indian/Alaska Natives.

TRICHINELLOSIS. Number of reported cases, by year — United States, 1978–2008



In 2008, a total of 39 cases of trichinellosis were reported to CDC, the most since 1992 when 41 cases were reported. An outbreak of trichinellosis occurred among attendees of a cultural celebration in northern California in which raw and undercooked bear meat was the implicated meat product; this outbreak accounted for 30 of the cases. Of the remaining nine cases, the source of infection was unknown in seven cases and commercial pork was implicated in two. Consumption of raw and undercooked bear meat continues to be the most frequent cause of reported human trichinellosis in the United States. Prevention strategies should continue to address risk from consumption of raw or undercooked pork and wild game meat, especially bear.

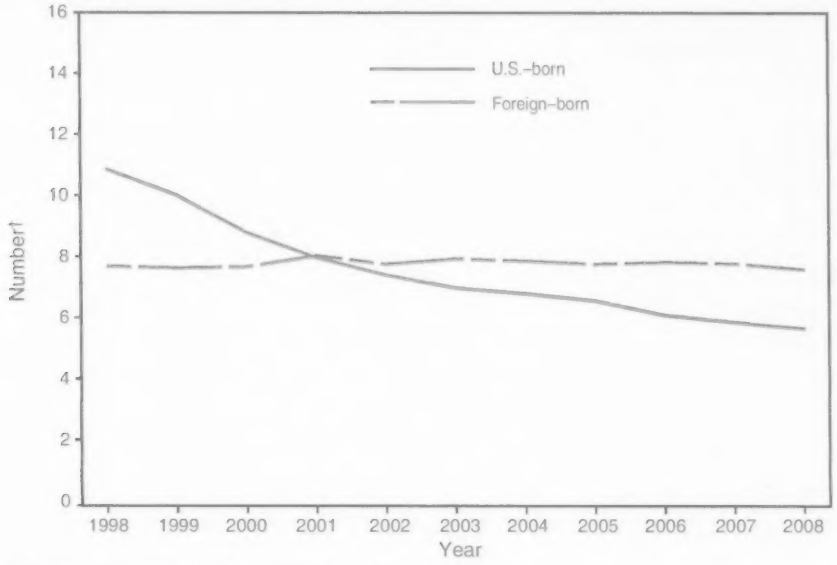
TUBERCULOSIS. Incidence* — United States and U.S. territories, 2008



* Per 100,000 population.

Thirty-one states had a rate of ≤3.5 TB cases per 100,000 in 2008, the interim goal for the year 2000 established by the Advisory Council for the Elimination of Tuberculosis. Ten states, New York City, and Washington, DC reported a rate above the national average in 2008.

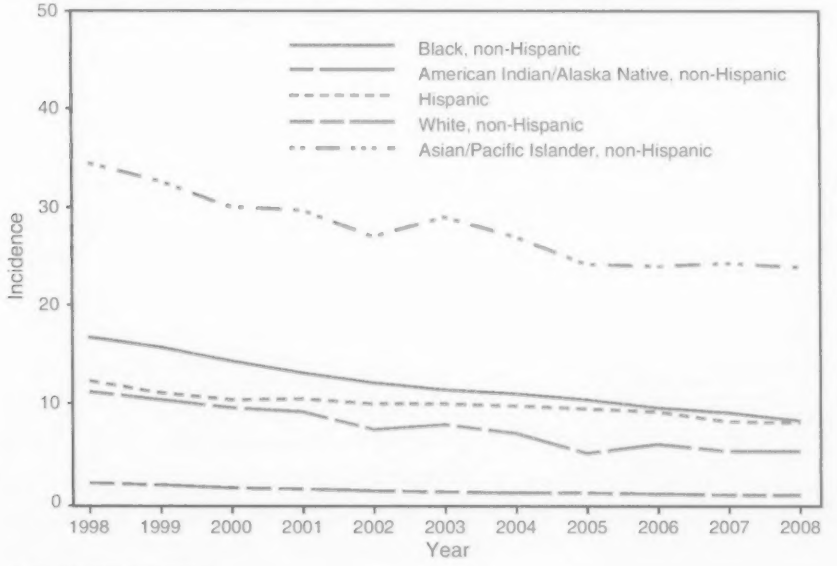
TUBERCULOSIS. Number of reported cases among U.S.-born and foreign-born persons,* by year — United States, 1998–2008



* For 91 cases, origin of patients was unknown
† In thousands

The number of TB cases occurring among the foreign-born has remained fairly constant during 1998–2008. The percentage of U.S. TB cases among the foreign-born has increased from 42% in 1998 to 59% in 2008.

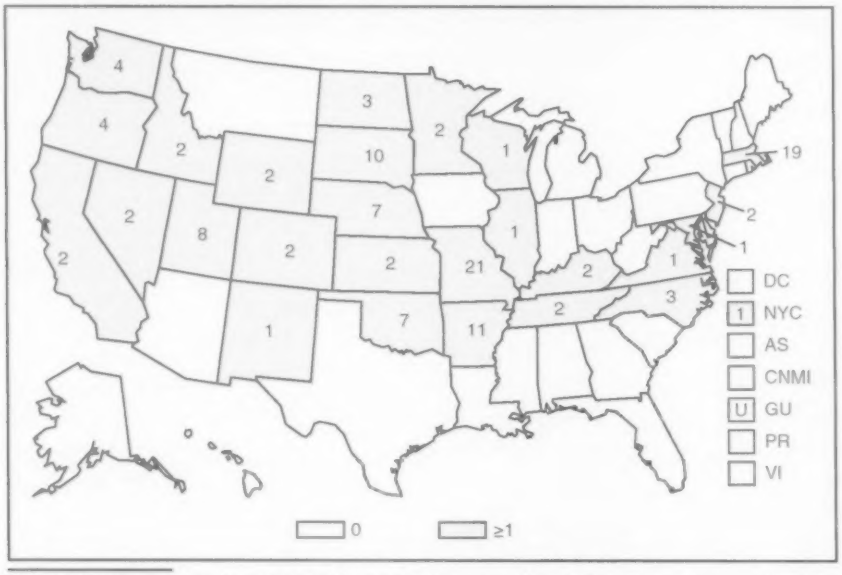
TUBERCULOSIS. Incidence,* by race/ethnicity — United States, 1998–2008



* Per 100,000 population.

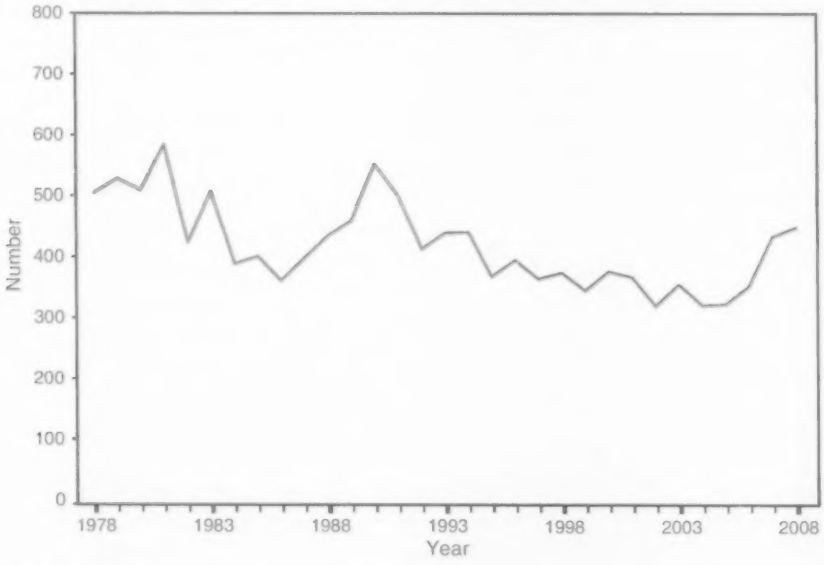
From 1998 to 2008, case rates in Asian / Pacific Islanders declined by 25%. All other racial and ethnic groups declined by at least 35% during this period. Since 2003, Asian only and Native Hawaiian and other Pacific Islander have been reported separately but were merged for this graph for continuity in reporting trends.

TULAREMIA. Number of reported cases — United States and U.S. territories, 2008



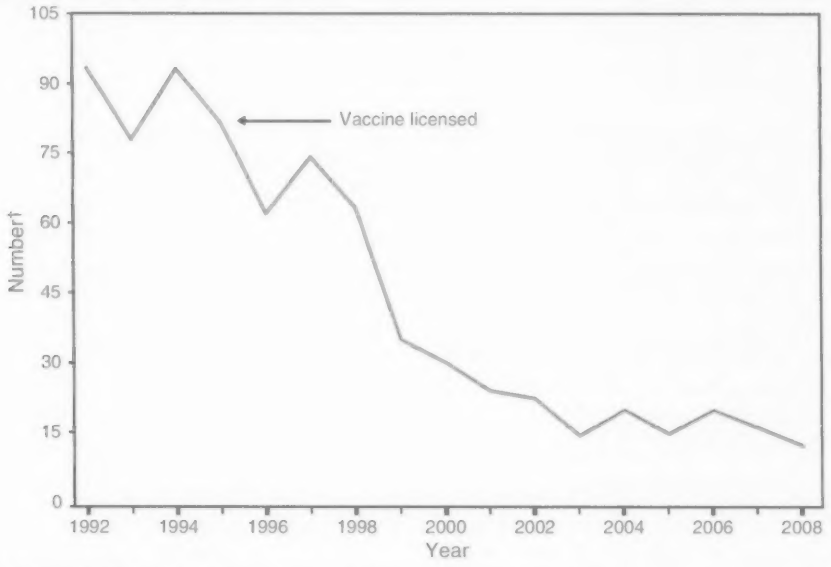
Historically, tularemia has been reported from all states except Hawaii. To define the geographic distribution of *Francisella tularensis* subspecies, CDC requests that state public health laboratories forward isolates to the CDC laboratory in Fort Collins, Colorado.

TYPHOID FEVER. Number of reported cases, by year — United States, 1978–2008



Typhoid fever in the United States is primarily a disease of travelers, for whom vaccination against typhoid fever is recommended. Emerging resistance to fluoroquinolone antimicrobial agents has complicated the clinical management of cases of typhoid and paratyphoid fever.

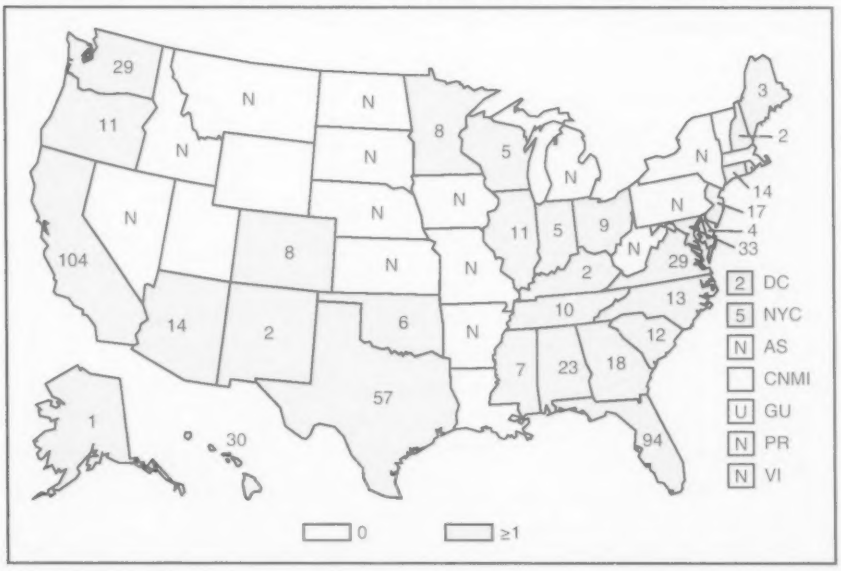
VARICELLA (CHICKENPOX). Number of reported cases — Illinois, Michigan, Texas, and West Virginia*, 1992–2008



* Source: CDC. National Center for Immunization and Respiratory Diseases.
† In thousands.

In four states (Michigan, Illinois, Texas, and West Virginia), the number of cases reported in 2008 was 24% lower than 2007 and 85% less than the number reported during the prevaccine years 1993–1995.

VIBRIOSIS. Number of reported cases — United States and U.S. territories, 2008



Infections caused by noncholera *Vibrio* organisms became nationally notifiable in January 2007. Infections are acquired through consumption of contaminated seafood, particularly oysters, or by contact of broken skin with salt water containing *Vibrio* organisms.

PART 3

Historical Summaries of Notifiable Diseases in the United States, 1977–2008

Abbreviations and Symbols Used in Tables

NA Data not available.

— No reported cases.

Notes: Rates <0.01 after rounding are listed as 0.

Data in the *MMWR Summary of Notifiable Diseases — United States, 2008* might not match data in other CDC surveillance reports because of differences in the timing of reports, the source of the data, and the use of different case definitions.

TABLE 7. Reported incidence* of notifiable diseases — United States, 1998–2008

Disease	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
AIDS†	7.21	16.66	14.95	14.88	15.29	15.36	15.28	14.00	12.87	12.53	13.00
Anthrax	—	—	0	0.01	0	—	—	—	0	0	0
Botulism, total (includes wound and unspecified)	0.04	0.06	0.05	0.06	0.03	0.01	0.02	0.01	0.02	0.05	0.05
foodborne	0.01	0.01	0.01	0.01	0	0.01	0.01	0.01	0.01	0.01	0.01
Brucellosis	0.03	0.03	0.03	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.03
Chancroid	0.07	0.06	0.03	0.01	0.02	0.02	0	0.01	0.01	0.01	0.01
Chlamydia trachomatis infections	236.57	254.10	257.76	278.32	296.55	304.71	319.61	332.51	347.80	370.20	401.34
Cholera	0.01	0	0	0	0	0	0	0	0	0	0
Coccidioidomycosis	0.99	3.58	4.69	6.71	3.03	2.57	4.14	6.24	6.79	14.39	7.76
Cryptosporidiosis	1.61	0.92	1.17	1.34	1.07	1.22	1.23	1.93	2.05	3.73	3.02
Cyclosporiasis	§	0.07	0.03	0.07	0.06	0.03	0.14	0.24	0.06	0.04	0.05
Diphtheria	0	0	0	0	0	0	—	—	—	—	—
Domestic arboviral											
California serogroup virus											
neuroinvasive	—	—	—	—	—	—	—	0.02	0.02	0.02	0.02
nonneuroinvasive	§	§	§	§	§	§	§	0	0	0	0
Eastern equine encephalitis virus											
neuroinvasive	—	—	—	—	—	—	—	0	0	0	0
nonneuroinvasive	§	§	§	§	§	§	§	0	0	0	0
Powassan virus											
neuroinvasive	—	—	—	—	—	—	—	0	0	0	0
nonneuroinvasive	§	§	§	§	§	§	§	0	0	0	0
St. Louis encephalitis virus											
neuroinvasive	—	—	—	—	—	—	—	0	0	0	0
nonneuroinvasive	§	§	§	§	§	§	§	0	0	0	0
West Nile virus											
neuroinvasive	—	—	—	—	—	—	—	0.45	0.50	0.41	0.23
nonneuroinvasive	§	§	§	§	§	§	§	0.58	0.94	0.80	0.22
Western equine encephalitis virus											
neuroinvasive	—	—	—	—	—	—	—	—	—	—	—
nonneuroinvasive	§	§	§	§	§	§	§	—	—	—	—
Ehrlichiosis											
human granulocytic (HGE)	0.16	0.14	0.15	0.10	0.18	0.13	0.20	0.28	0.23	0.31	¶
human monocytic (HME)	0.03	0.06	0.09	0.05	0.08	0.11	0.12	0.18	0.20	0.30	¶
human (other and unspecified)**	—	—	—	—	—	—	—	0.04	0.08	0.12	¶
Ehrlichiosis/Anaplasmosis											
Ehrlichia chaffeensis	§	§	§	§	§	§	§	§	§	§	0.35
Ehrlichia ewingii	§	§	§	§	§	§	§	§	§	§	0
Anaplasma phagocytophilum	§	§	§	§	§	§	§	§	§	§	0.43
Undetermined	§	§	§	§	§	§	§	§	§	§	0.06
Encephalitis/meningitis, arboviral††											
California serogroup virus	0.04	0.03	0.04	0.05	0.06	0.06	0	††	††	††	††
Eastern equine virus	0	0	0	0	0	0	0	††	††	††	††
Powassan virus	§	§	§	§	0	0	0	††	††	††	††
St. Louis virus	0.01	0	0	0.03	0.01	0.01	0	††	††	††	††
West Nile virus	§	§	§	§	1.01	1.00	0.43	††	††	††	††
Western equine	0	0	0	0	0	0	—	††	††	††	††
Enterohemorrhagic *Escherichia coli*											
O157:H7	1.28	1.77	1.74	1.22	1.36	0.93	0.87	0.89	§	§	§
non-O157	§	§	§	0.19	0.08	0.09	0.13	0.19	§	§	§
not serogrouped	§	§	§	0.06	0.02	0.05	0.13	0.16	§	§	§
Giardiasis	§	§	§	§	8.06	6.84	8.35	7.82	7.28	7.66	7.41
Gonorrhea	132.88	133.20	131.65	128.53	125.03	116.37	113.52	115.64	120.90	118.90	111.64
Haemophilus influenzae, invasive disease											
all ages, serotypes	0.44	0.48	0.51	0.57	0.62	0.70	0.72	0.78	0.82	0.85	0.96
age <5 yrs											
serotype b	§	§	§	§	0.18	0.16	0.03	0.04	0.14	0.11	0.14
nonserotype b	§	§	§	§	0.75	0.59	0.04	0.67	0.86	0.97	1.18
unknown serotype	§	§	§	§	0.80	1.15	0.97	1.08	0.88	0.88	0.79
Hansen disease (Leprosy)	0.05	0.04	0.04	0.03	0.04	0.03	0.04	0.03	0.03	0.04	0.03
Hantavirus pulmonary syndrome	§	§	0.02	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Hemolytic uremic syndrome postdiarrheal	§	§	0.10	0.08	0.08	0.06	0.07	0.08	0.11	0.10	0.12
Hepatitis, viral, acute											
A	8.59	6.25	4.91	3.77	3.13	2.66	1.95	1.53	1.21	1.00	0.86
B	3.80	2.82	2.95	2.79	2.84	2.61	2.14	1.78	1.62	1.51	1.34
C	1.30	1.14	1.17	1.41	0.65	0.38	0.31	0.23	0.26	0.28	0.29
Influenza-associated pediatric mortality	§	§	§	§	§	§	§	0.02	0.07	0.10	0.12
Legionellosis	0.51	0.41	0.42	0.42	0.47	0.78	0.71	0.78	0.96	0.91	1.05

See footnotes on next page.

TABLE 7. (*Continued*) Reported incidence* of notifiable diseases — United States, 1998–2008

Disease	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Listeriosis	§	0.31	0.29	0.22	0.24	0.24	0.32	0.31	0.30	0.27	0.25
Lyme disease, total¶¶	6.39	5.99	6.53	6.05	8.44	7.39	6.84	7.94	6.75	9.21	11.67
confirmed	¶¶	¶¶	¶¶	¶¶	¶¶	¶¶	¶¶	¶¶	¶¶	¶¶	9.59
probable	¶¶	¶¶	¶¶	¶¶	¶¶	¶¶	¶¶	¶¶	¶¶	¶¶	2.08
Malaria	0.60	0.61	0.57	0.55	0.51	0.49	0.51	0.51	0.50	0.47	0.42
Measles	0.04	0.04	0.03	0.04	0.02	0.02	0.01	0.02	0.02	0.01	0.05
Meningococcal disease, invasive											
all serogroups	1.01	0.92	0.83	0.83	0.64	0.61	0.47	0.42	0.40	0.36	0.39
serogroup A,C,Y, and W-135	¶¶	¶¶	¶¶	¶¶	¶¶	¶¶	¶¶	0.10	0.11	0.11	0.11
serogroup B	¶¶	¶¶	¶¶	¶¶	¶¶	¶¶	¶¶	0.05	0.07	0.06	0.06
other serogroup	¶¶	¶¶	¶¶	¶¶	¶¶	¶¶	¶¶	0.01	0.01	0.01	0.01
serogroup unknown	¶¶	¶¶	¶¶	¶¶	¶¶	¶¶	¶¶	0.26	0.22	0.18	0.20
Mumps	0.25	0.14	0.13	0.10	0.10	0.08	0.09	0.11	2.22	0.27	0.15
Novel influenza A virus infections	§	§	§	§	§	§	§	§	§	0	0
Pertussis	2.74	2.67	2.88	2.69	3.47	4.04	8.88	8.72	5.27	3.49	4.40
Plague	0	0	0	0	0	0	0	0	0.01	0	0
Poliomyelitis, paralytic	0.01	0	0	0	0	0	0	0	0	—	—
Poliovirus infection, nonparalytic	§	§	§	§	§	§	§	§	§	—	—
Psittacosis	0.02	0.01	0.01	0.01	0.01	0	0	0.01	0.01	0	0
Q Fever***	§	0	0.01	0.01	0.02	0.02	0.03	0.05	0.06	0.06	0.04
acute	***	***	***	***	***	***	***	***	***	***	0.04
chronic	***	***	***	***	***	***	***	***	***	***	0
Rabies, human	0	0	0	0	0	0	0	0	0	0	0
Rocky Mountain spotted fever, total†††	0.14	0.21	0.18	0.25	0.39	0.38	0.60	0.66	0.80	0.77	0.85
confirmed	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	0.06
probable	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	0.78
Rubella	0.13	0.21	0.06	0.01	0.01	0	0	0	0	0	0.01
Rubella, congenital syndrome	0	0	0	0	0	0	0	0	0	—	—
Salmonellosis	16.17	14.89	14.51	14.39	15.73	15.16	14.47	15.43	15.45	16.03	16.92
SARS-CoV§§§	§	§	§	§	§	0	—	—	—	—	—
Shigellosis	8.74	6.43	8.41	7.19	8.37	8.19	4.99	5.51	5.23	6.60	7.50
Shiga toxin-producing *E. coli* (STEC)	§	§	§	§	§	§	§	§	1.71	1.62	1.76
Smallpox	§	§	§	§	§	§	—	—	—	—	—
Streptococcal disease, invasive, group A	0.83	0.87	1.45	1.60	1.69	2.04	1.82	2.00	2.24	1.89	2.30
Streptococcal, toxic-shock syndrome	0.02	0.02	0.04	0.04	0.05	0.06	0.06	0.07	0.06	0.06	0.07
Streptococcus pneumoniae, invasive disease											
drug resistant, all ages	1.44	2.39	2.77	2.11	1.14	0.99	1.49	1.42	2.19	1.49	1.60
age <5 yrs	—	—	—	—	—	—	—	—	—	3.73	3.51
non-drug resistant, age <5 yrs	§	§	§	1.03	3.62	8.86	8.22	8.21	11.93	13.59	13.36
Syphilis, total, all stages	14.19	13.07	11.58	11.45	11.68	11.90	11.94	11.33	12.46	13.67	15.34
congenital (age <1 yr)	21.39	14.62	14.29	12.52	11.44	10.56	9.12	8.24	9.07	10.46	10.12
primary and secondary	2.61	2.50	2.19	2.17	2.44	2.49	2.71	2.97	3.29	3.83	4.48
Tetanus	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Toxic-shock syndrome	0.06	0.05	0.06	0.05	0.05	0.05	0.04	0.04	0.05	0.04	0.03
Trichinellosis	0.01	0	0.01	0.01	0.01	0	0	0.01	0.01	0	0.01
Tuberculosis	6.79	6.43	6.01	5.68	5.36	5.17	5.09	4.80	4.65	4.44	4.28
Tularemia	§	§	0.06	0.05	0.03	0.04	0.05	0.05	0.03	0.05	0.04
Tyhoid fever	0.14	0.13	0.14	0.13	0.11	0.12	0.11	0.11	0.12	0.14	0.15
Vancomycin-intermediate *Staphylococcus aureus*	§	§	§	§	§	§	—	0	0	0.02	0.03
Vancomycin-resistant *Staphylococcus aureus*	§	§	§	§	§	§	0	0	0	0	0
Varicella (chickenpox)†††	70.28	44.56	26.18	19.51	10.27	7.27	18.41	19.64	28.65	18.68	13.56
Vibriosis	§	§	§	§	§	§	§	§	§	0.25	0.24
Yellow fever	—	0	—	0	0	—	—	—	—	—	—

* Per 100,000 population.
† Acquired immunodeficiency syndrome.
§ Not nationally notifiable.
¶ As of January 1, 2008, these categories were replaced with codes for *Anaplasma phagocytophilum*. Refer to Ehrlichiosis/Anaplasmosis.
** Data for ehrlichiosis attributable to other or unspecified agents were being withheld from publication pending the outcome of discussions concerning the reclassification of certain *Ehrlichia* species, which would probably affect how data in this category were reported.
†† See also "Domestic arboviral" disease incidence rates. In 2005, the domestic arboviral disease surveillance case definitions and categories were revised. The nationally notifiable arboviral encephalitis and meningitis conditions continued to be nationally notifiable in 2005 and 2006, but were included under the category of arboviral neuroinvasive disease. In addition, in 2005, nonneuroinvasive domestic arboviral disesases for the six domestic arboviruses listed above were included to the list of nationally notifiable diseases.
§§ National surveillance case definition revised in 2008; probable cases not previously reported.
¶¶ To help public health specialists monitor the impact of the new meningococcal conjugate vaccine (Menactra®, licensed in the United States in January 2005), the data display for meningococcal disease was modified to differentiate the fraction of the disease that is vaccine preventable (serogroups A,C,Y, and W-135) from the non–preventable fraction of disease (serogroup B and others).
*** In 2008, Q fever acute and chronic reporting categories were recognized as a result of revision to the Q fever case definition. Before that time, case counts were not differentiated relative to acute and chronic Q fever cases.
††† Revision of national surveillance case definition distinguishing between confirmed and probable cases; total counts include six case reports with unknown case status.
§§§ Severe acute respiratory syndrome-associated coronavirus disease.
**** Varicella became a nationally notifiable disease in 2003.

TABLE 8. Reported cases of notifiable diseases — United States, 2001–2008

Disease	2001	2002	2003	2004	2005	2006	2007	2008
AIDS*†	41,868	42,745	44,232	44,108	41,120	38,423	37,503	39,202[1]
Anthrax	23	2	—	—	—	1	1	—
Botulism, total (includes wound and unspecified)	155	118	129	133	135	165	144	145
foodborne	39	28	20	16	19	20	32	17
infant	97	69	76	87	85	97	85	109
Brucellosis	136	125	104	114	120	121	131	80
Chancroid[§]	38	67	54	30	17	33	23	25
Chlamydia trachomatis infections[§]	783,242	834,555	877,478	929,462	976,445	1,030,911	1,108,374	1,210,523
Cholera	3	2	2	5	8	9	7	5
Coccidioidomycosis	3,922	4,968	4,870	6,449	6,542	8,917	8,121	7,523
Cryptosporidiosis	3,785	3,016	3,506	3,577	5,659	6,071	11,170	9,113
Cyclosporiasis	147	156	75	171	543	137	93	139
Diphtheria	2	1	1	—	—	—	—	—
Domestic arboviral diseases[¶]								
California serogroup virus								
neuroinvasive	—	—	—	—	73	64	50	55
nonneuroinvasive	**	**	**	**	7	5	5	7
Eastern equine encephalitis virus								
neuroinvasive	—	—	—	—	21	8	3	4
nonneuroinvasive	**	**	**	**	—	—	1	—
Powassan virus								
neuroinvasive	—	—	—	—	1	1	7	2
nonneuroinvasive	**	**	**	**	—	—	—	
St. Louis encephalitis virus								
neuroinvasive	—	—	—	—	7	7	8	8
nonneuroinvasive	**	**	**	**	6	3	1	5
West Nile virus								
neuroinvasive	—	—	—	—	1,309	1,495	1,227	689
nonneuroinvasive	**	**	**	**	1,691	2,744	2,403	667
Western equine encephalitis virus								
neuroinvasive	—	—	—	—	—	—	—	—
nonneuroinvasive	**	**	**	**	—	—	—	—
Ehrlichiosis								
human granulocytic (HGE)	261	511	362	537	786	646	834	††
human monocytic (HME)	142	216	321	338	506	578	828	††
human (other and unspecified)	§§	§§	§§	§§	112	231	337	††
Ehrlichiosis/Anaplasmosis								
Ehrlichia chaffeensis	**	**	**	**	**	**	**	957
Ehrlichia ewingii	**	**	**	**	**	**	**	9
Anaplasma phagocytophilum	**	**	**	**	**	**	**	1,009
Undetermined	**	**	**	**	**	**	**	132
Encephalitis/Meningitis, arboviral								
California serogroup virus	128	164	108	112	¶¶	¶¶	¶¶	¶¶
Eastern equine virus	9	10	14	6	¶¶	¶¶	¶¶	¶¶
Powassan virus	**	1	—	1	¶¶	¶¶	¶¶	¶¶
St. Louis virus	79	28	41	12	¶¶	¶¶	¶¶	¶¶
West Nile virus	**	2,840	2,866	1,142	¶¶	¶¶	¶¶	¶¶
Western equine virus	—	—	—	—	¶¶	¶¶	¶¶	¶¶
Enterohemorrhagic *Escherichia coli* infection								
Shiga toxin-positive								
O157:H7	3,287	3,840	2,671	2,544	2,621	**	**	**
non-O157	171	194	252	316	501	**	**	**
not serogrouped	20	60	156	308	407	**	**	**

See footnote on page 83.

TABLE 8. (*Continued*) Reported cases of notifiable diseases — United States, 2001–2008

Disease	2001	2002	2003	2004	2005	2006	2007	2008
Giardiasis	**	21,206	19,709	20,636	19,733	18,953	19,417	18,908
Gonorrhea§	361,705	351,852	335,104	330,132	339,593	358,366	355,991	336,742
Haemophilus influenzae, invasive disease								
all ages, serotypes	1,597	1,743	2,013	2,085	2,304	2,496	2,541	2,886
age <5 yrs								
serotype b	**	34	32	19	9	29	22	30
nonserotype b	**	144	117	135	135	175	199	244
unknown serotype	**	153	227	177	217	179	180	163
Hansen disease (Leprosy)	79	96	95	105	87	66	101	80
Hantavirus pulmonary syndrome	8	19	26	24	26	40	32	18
Hemolytic uremic syndrome postdiarrheal	202	216	178	200	221	288	292	330
Hepatitis, viral, acute¶								
A	10,609	8,795	7,653	5,683	4,488	3,579	2,979	2,585
B	7,843	7,996	7,526	6,212	5,119	4,713	4,519	4,033
C	3,976	1,835	1,102	720	652	766	845	877
Influenza-associated pediatric mortality	**	**	**	**	45	43	77	90
Legionellosis	1,168	1,321	2,232	2,093	2,301	2,834	2,716	3,181
Listeriosis	613	665	696	753	896	884	808	759
Lyme disease, total††	17,029	23,763	21,273	19,804	23,305	19,931	27,444	35,198
confirmed	†††	†††	†††	†††	†††	†††	†††	28,921
probable	†††	†††	†††	†††	†††	†††	†††	6,277
Malaria	1,544	1,430	1,402	1,458	1,494	1,474	1,408	1,255
Measles	116	44	56	37	66	55	43	140
Meningococcal disease, invasive§§§								
all serogroups	2,333	1,814	1,756	1,361	1,245	1,194	1,077	1,172
serogroup A,C,Y, and W-135	—	—	—	—	297	318	325	330
serogroup B	—	—	—	—	156	193	167	188
other serogroup	—	—	—	—	27	32	35	38
serogroup unknown	—	—	—	—	765	651	550	616
Mumps	266	270	231	258	314	6,584	800	454
Novel influenza A virus infections	**	**	**	**	**	**	4	2
Pertussis	7,580	9,771	11,647	25,827	25,616	15,632	10,454	13,278
Plague	2	2	1	3	8	17	7	3
Poliomyelitis, paralytic¶¶	—	—	—	—	1	—	—	—
Poliovirus infection, nonparalytic	—	—	—	—	—	—	—	—
Psittacosis	25	18	12	12	16	21	12	8
Q Fever***	26	61	71	70	136	169	171	120
acute	****	****	****	****	****	****	****	106
chronic	****	****	****	****	****	****	****	14
Rabies								
animal	7,150	7,609	6,846	6,345	5,915	5,534	5,862	4,196
human	1	3	2	7	2	3	1	2
Rocky Mountain spotted fever, total†††	695	1,104	1,091	1,713	1,936	2,288	2,221	2,563
confirmed	††††	††††	††††	††††	††††	††††	††††	190
probable	††††	††††	††††	††††	††††	††††	††††	2,367
Rubella	23	18	7	10	11	11	12	16
Rubella, congenital syndrome	3	1	1	—	1	1	—	—
Salmonellosis	40,495	44,264	43,657	42,197	45,322	45,808	47,995	51,040
SARS-CoV§§§§	**	**	8	—	—	—	—	—
Shiga toxin-producing *Escherichia coli* (STEC)	**	**	**	**	**	4,432	4,847	5,309
Shigellosis	20,221	23,541	23,581	14,627	16,168	15,503	19,758	22,625

See footnote on page 83.

TABLE 8. (*Continued*) Reported cases of notifiable diseases — United States, 2001–2008

Disease	2001	2002	2003	2004	2005	2006	2007	2008
Streptococcal disease, invasive, group A	3,750	4,720	5,872	4,395	4,715	5,407	5,294	5,674
Streptococcal, toxic-shock syndrome	77	118	161	132	129	125	132	157
Streptococcus pneumoniae, invasive disease								
drug resistant, all ages	2,896	2,546	2,356	2,590	2,996	3,308	3,329	3,448
age <5 yrs	—	—	—	—	—	—	563	532
non-drug resistant, age <5 yrs	498	513	845	1,162	1,495	1,861	2,032	1,998
Syphilis, all stages[§]	32,221	32,871	34,270	33,401	33,278	36,935	40,920	46,277
congenital (age <1 yr)	504	460	432	375	339	382	430	431
primary and secondary	6,103	6,862	7,177	7,980	8,724	9,756	11,466	13,500
Tetanus	37	25	20	34	27	41	28	19
Toxic-shock syndrome	127	109	133	95	90	101	92	71
Trichinellosis	22	14	6	5	16	15	5	39
Tuberculosis[¶¶¶]	15,989	15,075	14,874	14,517	14,097	13,779	13,299	12,904
Tularemia	129	90	129	134	154	95	137	123
Tyhoid fever	368	321	356	322	324	353	434	449
Vancomycin-intermediate *Staphylococcus aureus*	**	**	**	—	3	6	37	63
Vancomycin-resistant *Staphylococcus aureus*	**	**	**	1	2	1	2	—
Varicella (chickenpox)[*****]	22,536	22,841	20,948	32,931	32,242	48,445	40,146	30,386
Varicella (deaths)[†††††]	**	9	2	9	3	—	6	2
Vibriosis (noncholera *Vibrio* species infections)	**	**	**	**	**	**	549	588
Yellow fever[§§§§§]	—	1	—	—	—	—	—	—

* Acquired immunodeficiency syndrome (AIDS)

† The total number of AIDS cases includes all cases reported to the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP), through December 31, 2008.

§ Cases were reported to the Division of STD Prevention, NCHHSTP, as of May 8, 2009.

¶ Totals reported to the Division of Vector–Borne Diseases, National Center for Emerging and Zoonotic Infectious Diseases (ArboNET Surveillance), as of May 1, 2009.

** Not nationally notifiable.

†† As of January 1, 2008, these categories :were replaced with codes for *Anaplasma phagocytophilum*. Refer to Ehrlichiosis/Anaplasmosis.

§§ Data for ehrlichiosis attributable to other or unspecified agents were being withheld from publication pending the outcome of discussions concerning the reclassification of certain *Ehrlichia* species, which would probably affect how data in this category were reported.

¶¶ See also "Domestic arboviral" disease incidence rates. In 2005, the domestic arboviral disease surveillance case definitions and categories were revised. The nationally notifiable arboviral encephalitis and meningitis conditions continued to be nationally notifiable in 2005 and 2006, but were included under the category of arboviral neuroinvasive disease. In addition, in 2005, nonneuroinvasive domestic arboviral disesases for the six domestic arboviruses listed above were added to the list of nationally notifiable diseases.

*** The anti–hepatitis C virus antibody test became available May 1990. Data on hepatitis B chronic, hepatitis B, perinatal infection, and hepatitis C, virus infection (past or present) are not included because they are undergoing data quality review.

††† National surveillance case definition revised in 2008; probable cases not previously reported.

§§§ To help public health specialists monitor the impact of the new meningococcal conjugate vaccine (Menactra®, licensed in the United States in January 2005), the data display for meningococcal disease was modified to differentiate the fraction of the disease that is potentially vaccine preventable (serogroups A, C, Y, and W-135) from the nonvaccine-preventable fraction of disease (serogroup B and others).

¶¶¶ Cases of vaccine-associated paralytic poliomyelitis caused by polio vaccine virus. Numbers might not reflect changes based on retrospective case evaluations or late reports (CDC. Poliomyelitis—United States, 1975–1984. MMWR 1986;35:180–2).

**** In 2008, Q fever acute and chronic reporting categories were recognized as a result of revision to the Q fever case definition. Before that time, case counts were not differentiated relative to acute and chronic Q fever cases.

†††† Revision of national surveillance case definition distinguishing between confirmed and probable cases; total counts include six case reports with unknown case status.

§§§§ Severe acute respiratory syndrome (SARS)-associated coronavirus disease. The total number of SARS-CoV cases includes all cases reported to the Division of Viral Diseases, Coordinating Center for Infectious Diseases.

¶¶¶¶ Cases were reported to the Division of TB Elimination, NCHHSTP, as of May 15, 2009.

***** Varicella was taken off the nationally notifiable disease list in 1981. Varicella again became nationally notifiable in 2003.

††††† Death counts provided by the Division of Viral Diseases, National Center for Immunization and Respiratory Diseases, as of June 30, 2009.

§§§§§ The last indigenous case of yellow fever was reported in 1911; all other cases since 1911 have been imported.

TABLE 9. Reported cases of notifiable diseases — United States, 1993–2000

Disease	1993	1994	1995	1996	1997	1998	1999	2000
AIDS*	103,691	78,279	71,547	66,885	58,492	46,521	45,104	40,758
Amebiasis	2,970	2,983	†	†	†	†	†	†
Anthrax	—	—	—	—	—	—	—	1
Aseptic meningitis	12,848	8,932	†	†	†	†	†	†
Botulism, total (including wound and unspecified)	97	143	97	119	132	116	154	138
foodborne	27	50	24	25	31	22	23	23
infant	65	85	54	80	79	65	92	93
Brucellosis	120	119	98	112	98	79	82	87
Chancroid§	1,399	773	606	386	243	189	143	78
Chlamydia trachomatis infections¶	†	†	477,638	498,884	526,671	604,420	656,721	702,093
Cholera	18	39	23	4	6	17	6	5
Coccidioidomycosis	†	†	1,212	1,697	1,749	2,274	2,826	2,867
Cryptosporidiosis	†	†	2,970	2,827	2,566	3,793	2,361	3,128
Diphtheria	—	2	—	2	4	1	1	1
Encephalitis, primary	919	717	†	†	†	†	†	†
Postinfectious	170	143	†	†	†	†	†	†
Encephalitis/Meningitis								
California serogroup virus	†	†	11	123	129	97	70	114
Eastern equine virus	†	†	1	5	14	4	5	3
St. Louis virus	†	†	†	2	13	24	4	2
Western equine virus	†	†	—	2	—	—	1	—
Escherichia coli O157:H7	†	1,420	2,139	2,741	2,555	3,161	4,513	4,528
Gonorrhea§	439,673	418,068	392,848	325,883	324,907	355,642	360,076	358,995
Granuloma inguinale	19	3	†	†	†	†	†	†
Haemophilus influenzae, invasive disease all ages, serotypes	1,419	1,174	1,180	1,170	1,162	1,194	1,309	1,398
Hansen disease (Leprosy)	187	136	144	112	122	108	108	91
Hantavirus pulmonary syndrome	†	†	—	NA	NA	NA	33	41
Hemolytic uremic syndrome, postdiarrheal	†	†	72	97	91	119	181	249
Hepatitis, viral, acute								
A	24,238	26,796	31,582	31,032	30,021	23,229	17,047	13,397
B	13,361	12,517	10,805	10,637	10,416	10,258	7,694	8,036
C/non-A, non-B**	4,786	4,470	4,576	3,716	3,816	3,518	3,111	3,197
unspecified	627	444	†	†	†	†	†	†
Legionellosis	1,280	1,615	1,241	1,198	1,163	1,355	1,108	1,127
Leptospirosis	51	38	†	†	†	†	†	†
Listeriosis	†	†	†	†	†	†	†	755
Lyme disease	8,257	13,043	11,700	16,455	12,801	16,801	16,273	17,730
Lymphogranuloma venereum	285	235	†	†	†	†	†	†
Malaria	1,411	1,229	1,419	1,800	2,001	1,611	1,666	1,560
Measles	312	963	309	508	138	100	100	86

See footnote on next page.

TABLE 9. (*Continued*) Reported cases of notifiable diseases — United States, 1993–2000

Disease	1993	1994	1995	1996	1997	1998	1999	2000
Meningococcal disease, invasive	2,637	2,886	3,243	3,437	3,308	2,725	2,501	2,256
Mumps	1,692	1,537	906	751	683	666	387	338
Murine typhus fever	25	†	†	†	†	†	†	†
Pertussis	6,586	4,617	5,137	7,796	6,564	7,405	7,288	7,867
Plague	10	17	9	5	4	9	9	6
Poliomyelitis, paralytic	4	8	7	7	6	3	2	—
Psittacosis	60	38	64	42	33	47	16	17
Q Fever	†	†	†	†	†	†	†	21
Rabies								
animal	9,377	8,147	7,811	6,982	8,105	7,259	6,730	6,934
human	3	6	5	3	2	1	—	4
Rheumatic fever, acute	112	112	†	†	†	†	†	†
Rocky Mountain spotted fever	456	465	590	831	409	365	579	495
Rubella	192	227	128	238	181	364	267	176
Rubella, congenital syndrome	5	7	6	4	5	7	9	9
Salmonellosis, excluding typhoid fever	41,641	43,323	45,970	45,471	41,901	43,694	40,596	39,574
Shigellosis	32,198	29,769	32,080	25,978	23,117	23,626	17,521	22,922
Streptococcal disease, invasive, Group A	†	†	613	1,445	1,973	2,260	2,667	3,144
Streptococcal toxic-shock syndrome	†	†	10	19	33	58	65	83
Streptococcus pneumoniae, invasive disease drug-resistant, all ages	†	†	309	1,514	1,799	2,823	4,625	4,533
Syphilis, total, all stages§	101,259	81,696	68,953	52,976	46,540	37,977	35,628	31,575
congenital (age <1 yr)	3,420	2,452	1,863	1,282	1,081	843	579	580
primary and secondary	26,498	20,627	16,500	11,387	8,550	6,993	6,657	5,979
Tetanus	48	51	41	36	50	41	40	35
Toxic-shock syndrome	212	192	191	145	157	138	113	135
Trichinellosis	16	32	29	11	13	19	12	16
Tuberculosis**	25,313	24,361	22,860	21,337	19,851	18,361	17,531	16,377
Tularemia	132	96	†	†	†	†	†	142
Typhoid fever	440	441	369	396	365	375	346	377
Varicella††	134,722	151,219	120,624	83,511	98,727	82,455	46,016	27,382
Yellow fever§§	—	—	—	1	—	—	—	—

* Acquired immunodeficiency syndrome.
† Not nationally notifiable.
§ Cases were reported to the Division of STD Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP).
¶ The anti-hepatitis C virus antibody test became available in May 1990.
** Cases were reported to the Division of TB Elimination, NCHHSTP.
†† Varicella was taken off the nationally notifiable disease list in 1981. Certain states continued to report these cases to CDC.
§§ The last indigenous case of yellow fever was reported in 1911; all other cases since 1911 have been imported.

TABLE 10. Reported cases of notifiable diseases* — United States, 1985–1992

Disease	1985	1986	1987	1988	1989	1990	1991	1992
AIDS†	8,249	12,932	21,070	31,001	33,722	41,595	43,672	45,472
Amebiasis	4,433	3,532	3,123	2,860	3,217	3,328	2,989	2,942
Anthrax	—	—	1	2	—	—	—	1
Aseptic meningitis	10,619	11,374	11,487	7234	10,274	11,852	14,526	12,223
Botulism, total (including wound and unspecified)	122	109	82	84	89	92	114	91
foodborne	49	23	17	28	23	23	27	21
infant	70	79	59	50	60	65	81	66
Brucellosis	153	106	129	96	95	82	104	105
Chancroid	2,067	3,756	4,998	5,001	4,692	4,212	3,476	1,886
Cholera	4	23	6	8	—	6	26	103
Diphtheria§	3	—	3	2	3	4	5	4
Encephalitis, primary	1,376	1,302	1,418	882	981	1,341	1,021	774
Postinfectious¶	161	124	121	121	88	105	82	129
Gonorrhea	911,419	900,868	780,905	719,536	733,151	690,169	620,478	501,409
Granuloma inguinale	44	61	22	11	7	97	29	6
Hansen disease (Leprosy)	361	270	238	184	163	198	154	172
Hepatitis, viral, acute								
A	23,210	23,430	25,280	28,507	35,821	31,441	24,378	23,112
B	26,611	26,107	25,916	23,177	23,419	21,102	18,003	16,126
C/non-A, non-B**	4,184	3,634	2,999	2,619	2,529	2,553	3,582	6,010
unspecified	5,517	3,940	3,102	2,470	2,306	1,671	1,260	884
Legionellosis	830	980	1,038	1,085	1,190	1,370	1,317	1,339
Leptospirosis	57	41	43	54	93	77	58	54
Lyme disease	††	††	††	††	††	††	††	9,895
Lymphogranuloma venereum	226	396	303	185	189	277	471	302
Malaria	1,049	1,123	944	1,099	1,277	1,292	1,278	1,087
Measles	2,822	6,282	3,655	3,396	18,193	27,786	9,643	2,237
Meningococcal disease, invasive	2,479	2,594	2,930	2,964	2,727	2,451	2,130	2,134
Mumps	2,982	7,790	12,848	4,866	5,712	5,292	4,264	2,572
Murine typhus fever	37	67	49	54	41	50	43	28
Pertussis	3,589	4,195	2,823	3,450	4,157	4,570	2,719	4,083
Plague	17	10	12	15	4	2	11	13
Poliomyelitis, total	8	10	§§	§§	§§	§§	§§	§§
paralytic§§	8	10	9	9	11	6	10	6
Psittacosis	119	224	98	114	116	113	94	92
Rabies								
animal	5,565	5,504	4,658	4,651	4,724	4,826	6,910	8,589
human	1	—	1	—	1	1	3	1
Rheumatic fever, acute	90	147	141	158	144	108	127	75
Rocky Mountain spotted fever	714	760	604	609	623	651	628	502
Rubella	630	551	306	225	396	1,125	1,401	160
Rubella, congenital syndrome	—	14	5	6	3	11	47	11
Salmonellosis	65,347	49,984	50,916	48,948	47,812	48,603	48,154	40,912
Shigellosis	17,057	17,138	23,860	30,617	25,010	27,077	23,548	23,931
Syphilis, primary and secondary	27,131	27,883	35,147	40,117	44,540	50,223	42,935	33,973
congenital (age <1 yr)	329	410	480	741	1,837	3,865	4,424	4,067
total, all stages	67,563	68,215	86,545	103,437	110,797	134,255	128,569	112,581
Tetanus	83	64	48	53	53	64	57	45
Toxic-shock syndrome	384	412	372	390	400	322	280	244
Trichinosis	61	39	40	45	30	129	62	41
Tuberculosis	22,201	22,768	22,517	22,436	23,495	25,701	26,283	26,673
Tularemia	177	170	214	201	152	152	193	159
Typhoid fever	402	362	400	436	460	552	501	414
Varicella	178,162	183,243	213,196	192,857	185,441	173,099	147,076	158,364

* No cases of yellow fever were reported during 1985–1992.
† Acquired immunodeficiency syndrome.
§ Cutaneous diphtheria ceased being notifiable nationally after 1979.
¶ Beginning in 1984, data were recorded by date of report to state health departments. Before 1984, data were recorded by onset date.
** The anti-hepatitis C virus antibody test became available in May 1990.
†† Not nationally notifiable.
§§ No cases of paralytic poliomyelitis caused by wild virus have been reported in the United States since 1993.

TABLE 11. Reported cases of notifiable diseases* — United States, 1977–1984

Disease	1977	1978	1979	1980	1981	1982	1983	1984
AIDS†	§	§	§	§	§	§	§	4,445
Amebiasis	3,044	3,937	4,107	5,271	6,632	7,304	6,658	5,252
Anthrax	–	6	–	1	–	–	–	1
Aseptic meningitis	4,789	6,573	8,754	8,028	9,547	9,680	12,696	8,326
Botulism, total (including wound and unspecified)	129	105	45	89	103	97	133	123
Brucellosis	232	179	215	183	185	173	200	131
Chancroid	455	521	840	788	850	1,392	847	666
Cholera	3	12	1	9	19	–	1	1
Diphtheria	84	76	59	3	5	2	5	1
Encephalitis								
primary	1,414	1,351	1,504	1,362	1,492	1,464	1,761	1,257
postinfectious	119	78	84	40	43	36	34	108
Gonorrhea	1,002,219	1,013,436	1,004,058	1,004,029	990,864	960,633	900,435	878,556
Granuloma inguinale	75	72	76	51	66	17	24	30
Hansen disease (Leprosy)	151	168	185	223	256	250	259	290
Hepatitis								
A (infectious)	31,153	29,500	30,407	29,087	25,802	23,403	21,532	22,040
B (serum)	16,831	15,016	15,452	19,015	21,152	22,177	24,318	26,115
C/non-A, non-B¶	§	§	§	§	§	§	§	3,871
unspecified	8,639	8,776	10,534	11,894	10,975	8,564	7,149	5,531
Legionellosis	359	761	593	475	408	654	852	750
Leptospirosis	71	110	94	85	82	100	61	40
Lymphogranuloma venereum	348	284	250	199	263	235	335	170
Malaria	547	731	894	2,062	1,388	1,056	813	1,007
Measles	57,345	26,871	13,597	13,506	3,124	1,714	1,497	2,587
Meningococcal disease, invasive	1,828	2,505	2,724	2,840	3,525	3,056	2,736	2,746
Mumps	21,436	16,817	14,225	8,576	4,941	5,270	3,355	3,021
Murine typhus fever	75	46	69	81	61	58	62	53
Pertussis	2,177	2,063	1,623	1,730	1,248	1,895	2,463	2,276
Plague	18	12	13	18	13	19	40	31
Poliomyelitis, total	19	8	22	9	10	12	13	9
paralytic	19	8	22	9	10	12	13	9
Psittacosis	94	140	137	124	136	152	142	172
Rabies								
animal	3,130	3,254	5,119	6,421	7,118	6,212	5,878	5,567
human	1	4	4	–	2	–	2	3
Rheumatic fever, acute	1,738	851	629	432	264	137	88	117
Rocky Mountain spotted fever	1,153	1,063	1,070	1,163	1,192	976	1,126	838
Rubella	20,395	18,269	11,795	3,904	2,077	2,325	970	752
Rubella, congenital syndrome	23	30	62	50	19	7	22	5
Salmonellosis	27,850	29,410	33,138	33,715	39,990	40,936	44,250	40,861
Shigellosis	16,052	19,511	20,135	19,041	9,859	18,129	19,719	17,371
Syphilis, total, all stages	64,621	64,875	67,049	68,832	72,799	75,579	74,637	69,888
primary and secondary	20,399	21,656	24,874	27,204	31,266	33,613	32,698	28,607
congenital (age <1 yr)	463	434	332	277	287	259	239	305
Tetanus	87	86	81	95	72	88	91	74
Toxic-shock syndrome	§	§	§	§	§	§	§	482
Trichinosis	143	67	157	131	206	115	45	68
Tuberculosis	30,145	28,521	27,669	27,749	27,373	25,520	23,846	22,255
Tularemia	165	141	196	234	288	275	310	291
Typhoid fever	398	505	528	510	584	425	507	390
Varicella	188,396	154,089	199,081	190,894	200,766	167,423	177,462	221,983

* No cases of yellow fever were reported during 1977–1984.
† Acquired immunodeficiency syndrome.
§ Not nationally notifiable.
¶ The anti–hepatitis C virus antibody test became available in May 1990.

TABLE 12. Number of deaths from selected nationally notifiable infectious diseases — United States, 2002–2006

Cause of death	ICD-10* cause of death code	No. of deaths				
		2002	2003	2004	2005	2006
AIDS†	B20-B24	14,095	13,658	13,063	12,543	12,133
Anthrax	A22	0	0	0	0	0
Encephalitis, arboviral						
California serogroup virus	A83.5	0	0	0	1	1
Eastern equine encephalitis virus	A83.2	1	1	2	2	2
Powassan virus	A84.8	0	0	0	0	0
St. Louis encephalitis virus	A83.3	3	2	2	1	2
Western equine encephalitis virus	A83.1	0	0	0	0	0
Botulism, foodborne	A05.1	2	6	0	5	3
Brucellosis	A23	1	0	0	2	2
Chancroid	A57	0	0	0	0	0
Chlamydia trachomatis infections	A56	0	0	0	0	0
Cholera	A00	0	0	0	0	0
Coccidioidomycosis	B38	84	73	100	76	110
Cryptosporidiosis	A07.2	1	0	1	2	2
Cyclosporiasis	A07.8	0	0	0	0	0
Diphtheria	A36	0	1	0	0	0
Ehrlichiosis	A79.8	0	1	0	0	0
Giardiasis	A07.1	1	0	1	0	1
Gonococcal infections	A54	7	6	2	3	3
Haemophilus influenzae	A49.2	7	5	11	4	4
Hansen disease (Leprosy)	A30	2	2	5	1	1
Hantavirus pulmonary syndrome	A98.5	0	0	0	0	8
Hemolytic uremic syndrome, postdiarrheal	D59.3	35	29	27	30	29
Hepatitis A, viral, acute	B15	76	54	58	43	34
Influenza-associated pediatric mortality	J10, J11	25	146	51	61	62
Legionellosis	A48.1	62	98	72	78	91
Listeriosis	A32	32	33	37	31	30
Lyme disease	A69.2, L90.4	6	4	6	7	5
Malaria	B50-B54	12	4	8	6	9
Measles	B05	0	1	0	1	0
Meningococcal disease	A39	161	161	138	123	105
Mumps	B26	1	0	0	0	1
Pertussis	A37	18	11	16	31	9
Plague	A20	0	0	1	1	3
Poliomyelitis	A80	0	0	0	0	0
Psittacosis	A70	0	0	0	0	0
Q fever	A78	0	1	1	2	2
Rabies, human	A82	3	2	3	1	2
Rocky Mountain spotted fever	A77.0	8	9	5	6	4
Rubella	B06	0	0	1	0	0
Rubella congenital syndrome	P35.0	6	4	5	8	2
Salmonellosis	A02	21	43	30	30	34
Shiga toxin-producing *Escherichia coli* (STEC)	A04.0-A04.4	4	2	4	5	3
Shigellosis	A03	4	2	0	9	3
Smallpox	B03	0	0	0	0	0
Streptococcal disease, invasive, group A	A40.0, A49.1	109	115	121	118	117
Streptococcus pneumoniae, invasive disease (restricted to <5 years of age)	A40.3, B95.3, J13	13	15	13	12	22
Syphilis, total, all stages	A50-A53	41	34	43	47	38
Tetanus	A35	5	4	4	1	4
Toxic-shock syndrome (other than streptococcal)	A48.3	78	71	71	55	57
Trichinellosis	B75	0	0	0	0	1
Tuberculosis	A16-A19	784	711	657	648	652
Tularemia	A21	2	2	1	0	0
Typhoid fever	A01.0	0	0	0	0	0
Varicella	B01	32	16	19	13	18
Yellow fever§	A95	1	0	0	0	0

SOURCE: CDC. CDC WONDER Compressed Mortality files (http://wonder.cdc.gov/mortSQL.html) provided by the National Center for Health Statistics. National Vital Statistics System, 1999-2006. Underlying causes of death are classified according to ICD-10. Data for 2007–2008 are not available. Data are limited by the accuracy of the information regarding the underlying cause of death indicated on death certificates and reported to the National Vital Statistics System.

* World Health Organization. International Statistical Classification of Diseases and Related Health Problems. Tenth Revision, 1992.

† Acquired immunodeficiency syndrome.

§ For one fatality, the cause of death was erroneously reported as yellow fever in the National Center for Health Statistics dataset for 2003. Subsequent investigation has determined that this death did not result from infection with wild-type yellow fever virus, and it is therefore not included in this table.

Selected Reading for 2008

General

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